Melanesian Marine Turtles Conservation Forum

Paradise Lodge
Gizo
Solomon Islands

October 29 -November 4, 2004

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Workshop Report

The **'Melanesian Marine Turtles Conservation Forum'** was jointly funded and facilitated by the Western Pacific Regional Fishery Management Council (WPRFMC); the Secretariat of the Pacific Regional Environment Programme (SPREP); the Canada- South Pacific Ocean Development (C-SPOD) and WWF South Pacific Programme.

Compiled by: Lisette Wilson[1]; Ken MacKay[2]; Anne Trevor[3]; Penina Solomona[4]

[1] WWF South Pacific Programme
[2] C-SPOD
[3] SPREP
[4] WWF South Pacific Programme

Acknowledgements

The organisers of the inaugural Melanesian Turtle Conservation Forum would like to thank the community participants, Government representatives, scientists and local, national and regional NGO's for their attendance and for freely sharing their knowledge, information and expertise during this extremely rich and satisfying workshop. We hope that you will be able to return to your communities, projects or programmes knowing that you are all part of a network dedicated to protecting marine turtles not only in our waters but also across country boundaries and regions.

A special 'thank you' to the Director of the Secretariat of the Pacific Regional Environment Programme (SPREP), Mr Asterio Takesy, for opening the workshop and for committing ongoing support from SPREP.

We would also like to thank the Premier for the Western Province of the Solomon Islands for warmly welcoming the participants to Gizo, and the Government of Solomon Islands for the support they have provided to this Forum.

Many thanks to the presenters and all who assisted with leading and facilitating the different sessions. Tang yu tumas to Wan Smolbag for leading the theatre workshop and John Pita and Peter Ramohia for bringing everyone back in one piece from the field trips. Many thanks also to the logistics support provided from the WWF Solomon Islands and WWF South Pacific Programme offices.

We also gratefully acknowledge the financial support from the Western Pacific Regional Fishery Management Council (WPRFMC) and the Secretariat of the Pacific Regional Environment Programme (SPREP), which enabled the successful delivery of this workshop.

This is a very exciting and timely development in the conservation of Melanesia's marine turtles; especially the leatherback and the organisers would like to commend all for supporting this programme since it begun in 1995. We look forward to the Melanesian Turtle Forum as being the next phase in this globally and nationally significant programme.

Executive Summary

INTRODUCTION

The waters and beaches of the Western Pacific are important nesting beaches, feeding areas and nurseries for leatherbacks, hawksbills, green and loggerhead turtles. These turtles are important culturally, economically and nutritionally for the people of Melanesia. However, they are being threatened from natural and human impacts and some species like the Western Pacific leatherback (*Dermochelys* coriacea) turtles are on the verge of extinction.

Building on from successful community-based marine turtle conservation projects and regional turtle conservation and management workshops, the Melanesian Marine Turtle Forum took place at the Paradise Lodge, Gizo, Western Province, Solomon Islands from October 28 to November 4, 2004. The Forum was designed to bring together a representative group of experts and practitioners, to increase and share knowledge and skills related to community-based conservation of marine turtles in the Western Pacific.

The workshop was conducted using formal presentations, video, informal stories, small group discussions, theatre presentations, community presentations, and field trips. The education and community conservation aspects included the four species of turtles and discussions and presentations were conducted in both English and Pidgin.The theatre group, Wan SmolBag, also conducted a theatre-training workshop for participants.

Guest speakers included scientists from Australia, America and Hawaii. Community members, and Environment and Fisheries staff from the region took part in the field trip and practicum, which was undertaken at leatherback nesting beaches on Isobel Island. This training component was designed to assist with the standardization of data collection techniques and methodology to allow comparisons of data and information between different beaches.

1. COUNTRY STATUS AND COMMUNITY MONITORING PROGRAMMES

a. Solomon Islands

Solomon Islands earliest studies were conducted in 1975, and indicated that there was a decline in turtles, primarily hawksbills, due to the bekko trade (products made from turtle shell). Later studies then highlighted the decline in green and leatherback turtle populations. Despite a ban in the shell trade in 1992, egg and meat harvesting continues to impact on turtle populations. More recent studies conducted by the Solomon Islands Department of Environment and Natural Resources and Department of Fisheries and Marine Resources have indicated a slight increase in Hawksbill and Green turtles at the Arnavon Marine Conservation Area (AMCA). SPREP metal tags and recently satellite transmitters have shown that green turtles migrate to Australia and Papua New Guinea. The greatest challenges include a lack of funding which affects the consistency of

monitoring activities; a lack of trained staff; and the lack of strong coordination and networking. Community based turtle conservation projects are being conducted at Tetapare, Baniata and Havila (Rendova) by the Tetapare Descendents Association (TDA) in partnership with WWF Solomon Islands and at the AMCA, Sasakolo and Litogahira by The Nature Conservancy (TNC).

b. Papua New Guinea

In Papua New Guinea the programme began in 1977 and concentrated on all the 6 species found in the Indo-Pacific region. These are the leatherbacks, hawksbill, green, loggerhead, olive ridly and flatback turtles. Results from the study indicated that hawksbills and green turtles were widely distributed and leatherbacks were mainly concentrated along the North coast, New Britain Islands and Bouganville. Other species were not common and although there were sightings of loggerheads there was no confirmed rookery. Long Island in the Madang Province is the only documented site for greens and hawksbills in PNG, although they are known to occur throughout the country. The leatherback turtle-monitoring programme started in 1999 with the Kamiali Wildlife management area (KWMA) and recorded that the peak nesting season is usually from the months of October through to March. This programme is a collaborative venture between the Department of Environment and Conservation (DEC), Village Development Trust, NOAA-US-NFMS and SPREP (C-SPOD). Since 2000, 86 Leatherback turtles have been tagged and 10 satellite devices deployed. Other methods include Passive Integrated Transponder (PIT) tags and genetic sampling. Community members and DEC staff have received training in the deployment of satellite devices and some DEC staff has received training in aerial surveying techniques. The Kamiali Integrated Conservation Development Group (KICDG) and more recently the Huon Leatherback Network, conduct leatherback community based conservation and monitoring programmes.

c. Papua, Indonesia

In Papua, Indonesia, the WWF Indonesia leatherback turtle conservation programme has two main components:
a) habitat protection for the two main leatherback nesting beaches around the Birdheads area (Jamursba Medi and Warmon, of Papua (largest remaining nesting population of Western Pacific leatherback turtles) and;
b) the reduction of mortality at their foraging grounds due to traditional hunting practise (Kei Islands, Maluku).

Recently the Indonesian Government pledged to protect these nesting beaches at the recent COP-7 Convention of Biodiversity in February 2004. WWF works in collaboration with NMFS-NOAA to conduct management related research such as satellite tagging and genetic sampling. Based on data sets for the two monitored beaches, approximately 1000 females nested per year during the nesting seasons of 2002 and 2003 (Jamursba Medi) and 2003 (Warmon). With beach protection, there has been noted success, particularly against poaching and predation, but other issues recently raised include threats to nesting habitats from coastal/private sector development and threats related to fisheries and

bycatch. The other project site is located on the southwest of Kei Islands in the Maluku province of Papua, Indonesia. Leatherback turtles have traditionally been hunted for generations for both subsistence and ritual purposes. The challenge is to integrate community traditional perceptions with scientific information (Kei Islands are a key foraging ground for juvenile leatherback turtles due to the richness of jellyfish brought on by currents and upwelling). From the initial work done, it has been identified that to reduce harvesting pressure, there is a need for quick economic interventions, especially in areas where the human population is high and increasing

d. Vanuatu

In Vanuatu, the turtle monitors network programme was established in 1995 to mark the Pacific Year of the Sea Turtle coordinated by SPREP. The first activities were to determine what communities knew about marine turtles and a programme was initiated in Efate. Based on information gathered from community consultations, a turtle play was produced by Wan Smolbag titled "*Me wan turtle*" which covered the life history of turtles. The play was then performed for the community and based on this presentation the community decided to establish a turtle-monitoring network. Support from SPREP (through C-SPOD) provided tags and organized training workshops for the monitors. From 1995 to 1996 the programme remained around Efate, but expanded to the outer islands in 1997, in recognition of the wider areas covered by the turtles. The latest monitor groups include islands north of Efate and Pentecost Island. In 2001, there was a change in name, to Vanua Tai monitors (in recognition of the connectivity of land, rivers and seas) To date, there are approximately 200 turtle monitors that cover about 70% of the country from north to south. A survey conducted in 2002-2003 provided a baseline assessment of green, hawksbill and leatherback turtles in Vanuatu. Successful aspects of the programme include awareness raising, turtle taboos and bans, monitors workshops and community support, eco-tourism activities around turtle programmes establishment of community based marine protected areas and conservation areas and Government regulations which prohibit trade in turtle products (Vanuatu is a signatory of CITES) and having a National Biodiversity Strategy and Action Plan (NBSAP). Challenges of this programme include the voluntary nature of the turtle monitors programme; turtles still being killed because of traditional practices for example those associated with the harvest of the new yams (Southern Malekula) and funding for the overall turtle monitors programme. The key to maintaining the sustainability of this programme is through co-operative management which builds on the integration of traditional management systems and good science and biological assessments of target resources.

2. ENVIRONMENT CONSERVATION AND COMMUNITY EDUCATION

This session was conducted in two halves where in the first half, communities were invited to present and discuss the types of tools utilised in their communities during their education programmes. The second half of the session involved the participants being in their respective country groups for discussions before presenting to the larger group.

Session 1 – Community tools.

a. Solomon Islands

In the Solomon Islands, WWF Solomon Islands found that drama groups such as the WWooFers, radio programmes, and capacity building workshops focusing on alternative sustainable livelihoods for example "Women in Fisheries" were successful tools in engaging communities. The Nature Conservancy (TNC) used newspaper interviews and articles, involvement in national activities (e.g. trade shows, World Water day etc.), distribution of posters, puppet shows and community consultations. Education awareness was the main tool used to resurrect the AMCA project when the field station was burnt down in 1982. At the Tetapare, Bainata and Havila sites, perseverance, community workshops, linking into church structures and small financial initiatives were key tools for engaging communities. Finally, poverty alleviation through capacity building programmes is the focus of the FSPI project and awareness-raising through Participatory Learning Assessment (PLA) process was found to be a very important for identifying problems and solutions while strengthening existing village structures

b. Papua New Guinea

In Papua New Guinea the KICDG project uses workshops to create awareness and also to recruit members of the community to do the beach monitoring. Small incentives (from project funds) are provided to compensate for the time spent away from family. The use of theatre groups to perform songs on the conservation and life history of the leatherbacks as well as the harvest of the turtle are also very important. The Conservation International project in Milne Bay is community based and focused on coastal marine conservation activities. The tools that are used need to be user friendly for the community. The main awareness and education methods are: Participatory Rural Appraisal (PRA) tools to determine the needs and the possible threats; village engagement trainers (VET) conduct awareness on marine resources eg. bech-der-mer and turtles; church mobilization; special events like the World Environment Day; the use of local youth bands; printin T-shirts with environmental messages; engaging turtle tagging monitors; including environmental education in the curriculum and writing articles for the in-flight magazine – Air Niugini. The Manus Environment Action Response Team (MEART) conducts community awareness workshops in areas of specific interest to the community and liases with other NGO's to develop conservation programmes that facilitate the exchange of ideas and information amongst communities on the sustainable use of marine and coastal resources.

c. Papua, Indonesia

In Papua, Indonesia, the key tools used are community consultations and awareness-raising programmes which are linked to finding alternative livelihood options and are fundamental to the long-term sustainability of this programme as well as developing a sense of community ownership. Community consultations using participatory methods are conducted and supported by information materials such as films, maps of migratory paths, booklets and other communication tools. It is also important to build on cultural values and ensure that customary institutions are the platforms to move this project

forward. Staying with the village community and building trust within the community were just as important as collecting data on harvesting levels.

d. Vanuatu

In Vanuatu, Wan Smolbag has five main methods and / or tools that are used to spread the message to the community about environmental concerns, turtles and other issues such as conflict resolution especially related to land issues. These are plays and drama; radio spots or radio drama; posters and turtle boards; videos; plays and documentaries and participatory workshops focused around specifically addressing issues relevant to a particular community. Reasons why these tools were successful include: they were entertaining and educational and promoted new attitudes towards marine resources; there had been extensive background and research conducted around key issues; good two-way flow and very interactive; timing was right as people were visually noticing the decline in their resources; support for traditional management structures and integrated into legal framework with support for training that allows both women and youth to participate and tagging programmes which provided a sense of ownership of resources for the communities.

Session 2 – Breakout groups.

Participants moved into their respective country groups (Solomon Islands, Papua New Guinea, and Vanuatu) and a regional group and were asked to base their discussions around the following questions and present back at the end of their discussions.

- ***Which education tools and methods have been successful and why?***
- ***What resources / capacity are required to improve community education?***
- ***How can we share our knowledge and experiences in community education?***

The main findings from this session were:

- Existing tools are successful, however, there needs to be a lot more sharing across project sites (nationally and regionally) to build community and national capacity;
- Funds, technical capacity building and the need for further awareness raising are the main challenges to community and national based marine turtle conservation programmes;
- There is a need to build community capacity in order to revive, strengthen and use traditional management practices;
- 2006 was proposed as the next 'Year of the Sea Turtle' and to be lead by SPREP;
- The need to ensure that all research findings are communicated back to the communities in a useable form to inform community based management plans;
- The use of maps as an awareness and educational communication tool is important;
- Another workshop of this nature should be held in 2006 and a representative group should be supported to present findings at the International Symposium of Sea Turtles in Greece in 2006.

3. TURTLE CONSERVATION AND RESEARCH IN MELANESIA

The objective of this session was to gather information on what species are found in these waters including their nesting beaches and feeding grounds. The first component gave participants a better understanding of the status of marine turtles in the Solomon Islands, Papua New Guinea, Papua (Indonesia), Vanuatu, Fiji, Florida and Australia. The second component consisted of breakout groups to further update information collected during the Western Pacific Sea Turtle workshop in Hawaii, 2004. The third component was a series of presentations on monitoring, research and data analysis by Scott Benson (NMFS) and Anne – Patricia Trevor, the Assistant Turtle Database Officer (SPREP).

In his opening remarks for this session Dr. Kenneth MacKay highlighted the following points-

- In the entire Pacific, there are perhaps only 2000 -3000 nesting females (twice that for total numbers), with the main nesting beaches for the Western Pacific being in Papua, Papua New Guinea, Solomon Islands and Vanuatu. It is very important that on beaches where there are leatherbacks, we need to conserve them by not eating adults or harvesting their eggs.
- The monitoring programme by SPREP has begun to record good numbers of leatherbacks. Records from Kamiali (PNG) indicate 29 leatherback females had nested during the last season; in Papua there are between 400 -700 that nest each year, and in Isabel (SI) perhaps 200 or more. Tetepare (SI) is also starting to show good numbers of 200 nesting leatherback and although the hatchling success rate is low with only 40 to 50 turtles hatching, due to its critically endangered status, each leatherback is important to conserve.
- An important message to take back to the communities is that although turtles come and nest on your beaches and feed on your seagrass beds or coral reefs, they do not belong to a particular country and it is up to all of us to work collectively to protect these visitors when they are in our waters.

Dr. Donna Kwan gave presentations on the status of marine turtles in Queensland, Dr. Karen Frutchey, (National Marine Fisheries Services) on experiences in Florida and Penina Solomona (WWF South Pacific Programme) on the status of marine turtles in Fiji. Dr. Scott Benson (NOAA) gave presentations on data collected using satellite transmitters and genetic sampling of leatherback populations at nesting beaches in Papua, Indonesia and Kamiali, and on aerial surveys along the North coast of PNG. Anne-Patricia Trevor (SPREP) gave a presentation on the Regional Marine Turtle Conservation Programme and the regional marine turtle database for Pacific island countries.

Country updates included:

- Solomon Islands Update (Refer to Appendix 1)
- Papua New Guinea Update (Refer to Appendix 2
- Papua, Indonesia Update (Refer to Appendix 3)

- Vanuatu Update (Refer to Appendix 4)

4. NETWORKING AND RECOMMENDATIONS

The objectives of this session were to:
- Assess the recommendations that had been presented over the week and identify any gaps or priorities that need to be addressed over the next three years;
- Develop an action plan around the recommendations;
- Identify a committed steering group to support SPREP in driving the action plan.

There were two main components to this session. Firstly, were discussions on the recommendations identified during the week which were organized around the following categories -
- *Research and Monitoring;*
- *Coordination and Collaboration;*
- *Awareness and Education;*
- *Capacity Building and Training.*

Secondly was to outline an "**Action Plan**" for these recommendations which were ranked according to a prioritisation criterion.

5. WESTERN PACIFIC ACTION PLAN

The top three priorities for the **'*Research and Monitoring*'** group were:
- The need for a standardized methodology (forms; field work; data recording; in country and centralized) in conjunction with technical and scientific support;
- The need for national monitoring networks;
- To assess, mitigate and manage impacts from beach erosion

The top three priorities for the **'*Coordination and Collaboration*'** group were:
- To conduct legal and policy reviews of existing marine and natural resource management frameworks including national obligations to Conventions and explore the potential for new trans-boundary agreements;
- To identify the current need to assess and analyse current levels of populations;
- To identify migratory routes within and between countries.

The top three priorities for the **'*Awareness and Education*'** group were:
- To further empower communities;
- To raise the profile of community conservation projects and thus increase donor awareness;
- To improve communication and understanding within communities with regards to leatherback conservation.

The top three priorities for the **'*Capacity building and Training*'** group were:

- To build community capacity to revive and strengthen the use of traditional practices (in communities & schools);
- To train monitors which include females, youths, and school groups;
- To acquire skills in turtle tagging (e.g.: use of the applicator and interpretation of data collected).

The time frame for these recommendations are over the next 3 years 2005-2007, and SPREP was nominated as the lead organisation, supported by a steering group consisting of community leaders, scientists and Government and NGO focal groups in country and at the regional level.

Key opportunities available to take forward these recommendations included:

- SPREP's Regional Marine Turtle Conservation Programme;
- National government departments;
- Institutions such as NOAA, WPRFMC, Queensland Wildlife and Parks;
- International, national and local NGOs: WWF, TNC, CI, FSPI; Wan Smolbag Theatre group etc.,
- Community Based Organisation's e.g. KICDG, HLBTN, TDA
- Community leaders.

Key Challenges include:

- Funding to ensure project sustainability;
- Technical resources and capacity;
- Co-ordination networks;
- A need for greater awareness raising and education programmes.

6. STEERING GROUP AND PROCESS

The SPREP RMTCP Vision and Goal were proposed by the participants to guide the Melanesian Turtle Forum Action Plan. The SPREP RMTCP Vision reads:

> *We see a future where generations of Pacific Island people will have choices about how they use and interact with sea turtles. This will be achieved if we take action now to ensure that sea turtle populations recover to become healthy, robust and stable. Sea turtles will be fulfilling their ecological role; and if they are taken by Pacific Island people, it will be on a sustainable basis to meet their cultural and nutritional needs*

The SPREP RMTCP Goal reads:

> *To recover turtle stocks, and conserve them and their cultural and nutritional values for the coastal people of the countries served by SPREP*

During the Western Pacific Sea Turtle Cooperative Research and Management workshop in Hawaii earlier in the year, key people in the Solomon Islands, Papua New Guinea, Papua, Indonesia, Vanuatu and regionally had been identified as being the main contacts to coordinate this Forum. They were:

- Vagi Rei - Papua New Guinea,
- John Pita amd Peter Ramohia- Solomon Islands,
- George Petro- Vanuatu,
- Crusea Hitipeuw- Papua (Indonesia).

At this Forum, it was proposed that the above named, and others yet to be identified would be the main contacts for supporting SPREP and the countries implement the Action Plan for the Melanesian Turtle Forum.

7. PROPOSED NEXT STEPS (2005) FOR THE MELANESIAN TURTLE FORUM:

- Recruitment of SPREP Species Coordinator;
- Identification of other organisations/individuals to be on the Steering Group;
- Endorsement by National Governments for members of the Steering Group and Terms of Reference to be developed;
- Update the SPREP RMTCP and Solomon Islands National Strategies and Actions Plans to reflect the recommendations and actions identified at the Melanesian Turtle Forum;
- Funds secured to convene the Steering Group at least once a year, preferably before the nesting season to evaluate and review process;
- Steering Group to secure funds and resources to coordinate the implementation of priority recommendations identified in the Melanesian Action Plan which include:
    - A review of policy and legal frameworks at both the National and Regional levels to assess their efficacy and identify gaps and strategies to provide an enabling legal environment (including enforcement) for marine turtle conservation;
    - Identifying a Technical Advisory Group to assist with implementing key recommendations relating to monitoring, community capacity building and training;
    - Drafting and finalising an agreement between SPREP and the Steering Group for the Melanesian Turtle Forum as to whether 2006 should be "Year of the Sea Turtle"- if affirmative, a communications and awareness strategy (local, national and regional) linked to a funding plan should be developed and considered as a high priority activity.

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BACKGROUND

The waters and beaches of the Western Pacific are important nesting beaches, feeding areas and nurseries for four marine turtle species - the green turtles, hawksbill turtles, loggerhead turtles, and leatherback turtles. These turtles are important culturally, economically and nutritionally for the people of the Melanesian countries of the Solomon Islands, Papua New Guinea (PNG), Papua (Indonesia) and Vanuatu. These turtles are now threatened and some species like the Western Pacific leatherbacks (*Dermochelys coriacea*) are on the verge of extinction.

There are however, a number of very successful community-based marine turtle conservation projects in all countries which:

- Involve all four species of turtles;
- Address issues of traditional consumption of eggs and turtle meat;
- Utilise traditional (taboo) and formal legal declarations of closed areas to reduce harvest and promote conservation;
- Involve community education including use of environmental drama; and
- Involve community turtle monitors or wardens to assist conservation and community-based research.

These programs, are currently establishing networks (or linkages) between projects and countries to promote sharing of methods, information, and results. To encourage additional collaboration and networking among programs and engage countries such as Vanuatu and Solomon Islands in turtle conservation, a Melanesian Marine Turtle Forum was proposed by representatives from these countries, during the Western Pacific Sea Turtle Cooperative Research and Management Workshop, held in Hawaii in early 2004. This group was also encouraged by case studies from Papua, Indonesia presented by WWF Papua, Indonesia. The South Pacific Regional Environment Programme (SPREP), Western Pacific Regional Fishery Management Council (WPRFMC), NOAA and C-SPOD endorsed the concept and WWF South Pacific Programme was nominated to co-ordinate and assist with the facilitation of the inaugural Melanesian Marine Turtles Conservation Forum.

1. INTRODUCTION

The inaugural Melanesian Marine Turtles Conservation Forum was held at the Paradise Lodge, Gizo, Western Province, Solomon Islands, from October 29 to November 4, 2004. Participants at the workshop came from a wide cross-section representing communities, community monitors and wardens, community leaders, NGO's, relevant government officials, and researchers.

The aim of the workshop was to bring together a representative a group of experts and practitioners, to increase and share their knowledge and skills related to community-based conservation of marine turtles in the Western South Pacific. Specifically the objectives of the workshop were to:

- Share information on marine turtle conservation in Melanesia;
- Provide training in community conservation strategies including environmental drama;
- Train village level monitors in beach survey and turtle tagging techniques specifically focused on leatherback turtles, and provide standardized data collection methods for leatherback surveys; and
- Initiate future networking and collaboration among key groups and communities in Melanesia including the establishment of a Western Pacific Leatherback Working Group and draft Plan of Action for Western Pacific leatherback turtles that includes strategies for trans-boundary plans of action (for all turtles).

a. WORKSHOP PROGRAMME

The workshop programme included formal presentations using PowerPoint, video, informal stories, small group discussions, theatre presentations, community presentations, and field trips. The education and community conservation aspects covered all four species of turtles and discussions and presentations were conducted in both English and Pidgin. Wan SmolBag from Vanuatu also conducted a theatre-training workshop for participants. Guest speakers included Dr. Donna Kwan (CRC Torres Strait) presenting a paper co-written by herself and Dr. Ian Bell, from the Queensland Parks & Wildlife Service on marine turtles in Queensland. Dr. Karen Frutchey from the Western Pacific Regional Fisheries Management Council presented on turtle programmes in Florida. Ms. Anne-Patricia Trevor presented on the SPREP database programme while the participants also heard on the status of marine turtle conservation in Fiji from Ms. Penina Solomona (WWF South Pacific Programme). Dr. Scott Benson (NMFS. San Diego) presented on the status of leatherbacks in the Western Pacific based on current monitoring programmes being conducted in this region and America.

Dr. Scott Benson who works closely with community groups in Papua (Indonesia) and PNG also conducted the research / training component, which focused on leatherback turtles. Community members, and Department of Environment and Fisheries staff from the region assisted Dr. Benson during the field trip and practicum, which was undertaken at a leatherback nesting beach on Isobel Island (SI). This training component was designed to assist with the standardization of data collection techniques and methodology

to allow comparisons of data and information between different beaches. Additional research by Dr. Benson to apply satellite tags to leatherback turtles in the Solomon Islands commenced after the workshop to determine inter-beach nesting and long-range migratory movements in the Solomon Islands.

b. REPORT FORMAT

The first sections of this report cover the opening session followed by country overviews (Solomon Islands, Papua/Indonesia, Papua New Guinea, Vanuatu, Fiji). These overviews include the status of turtles in the country and community based programmes. The second section is on environmental conservation and community education and the third section is on marine turtle conservation in Melanesia. The fourth section discusses networking opportunities and recommendations to address priority issues highlighted by the participants. In this section a Melanesian Turtle Forum Action Plan and Steering group has been proposed. The last sections document the Environmental Theatre workshop by Wan Smolbag and the field trip. This report has been complied from notes taken by the workshop rapporteur, participants' power point and / or verbal presentations and further supported by information from relevant reports.

Workshop Opening

Mr. Moses Pulekolo from the Tetapare Descendents Association opened the workshop with a prayer followed by a welcome and a short speech on the week's expectations by the Solomon Islands Government Representative, Mr. Peter Ramohia from the Department of Fisheries and Marine Resources. The Premier of the Western Province, Mr Clement Base then warmly welcomed participants to Gizo, especially for those from Samoa, Papua (Indonesia), Australia, Hawaii, Fiji, and PNG. Mr. Base said "this was a very special occasion where people from across the region have come together to share their knowledge and expertise on marine turtles and on behalf of the Western Province he wished the participants a successful workshop and an enjoyable stay in Gizo".

Mr Asterio Takesy the Director for the South Pacific Regional Environment Programme (SPREP) extended a warm welcome from SPREP and was very pleased and proud that a decision had been made to bring together such a wide range of regional and national expertise to discuss marine turtle issues. He said that "turtles have been part of a long history of development in the marine area and over the years provided sustenance for many communities and now are providing a means of revenue to parts of the Pacific. Mr. Taskesy also said, "turtles were a means of stability in terms of cultural stability" citing a legend from his country as an example. Although in Melanesia most species were abundant, on the International scale these species are endangered, with the leatherback being the most vulnerable and he challenged the Forum to provide realistic recommendations to address these threats. Modern fishing practices and limited Government capacity to address across country border issues are largely responsible for the decline in these species he stated. Mr. Takesy then reaffirmed SPREPs commitment to assist Pacific countries deal with these fundamental resource issues of which the key to success lay with building the capacity to develop management programmes at the

community level. Although SPREP has been less than successful in the database management, as the new director of SPREP, he will do his best with the support of the donor community and partners to make the information available for country and communities management strategies. Mr. Takesy concluded by congratulating the Melanesian region for convening this very important workshop and looked forward to the recommendations that this workshop would produce.

In the concluding speech, Dr. Kenneth Mackay the Field Program Coordinator of the Canada-South Pacific Ocean Development Program re-emphasised the importance of turtles, culturally, as totems, and also as food (which is a challenge for conservation). Dr. Mackay said "this meeting was unique bringing together representatives from a region with such a strong cultural heritage". Dr. Mackay recalled the long association that he and C-SPOD have had with SPREP in developing a turtle conservation programme for the Pacific. This partnership has led to the development of the Regional Marine Turtle Conservation Programme, monitoring programmes in the Solomons, the support for the Kamiali project in PNG, and the production of turtle awareness materials in Vanuatu with WanSmolBag. Unfortunately the project is ending, but he was very pleased to see the commitment by the participants at this workshop, especially the presence of the SPREP Director, who has made time to be part of this inaugural workshop.

SESSION 1.0
COUNTRY STATUS AND COMMUNITY MONITORING PROGRAMMES

1.1 SOLOMON ISLANDS

1.1.1 Solomon Islands Country Status

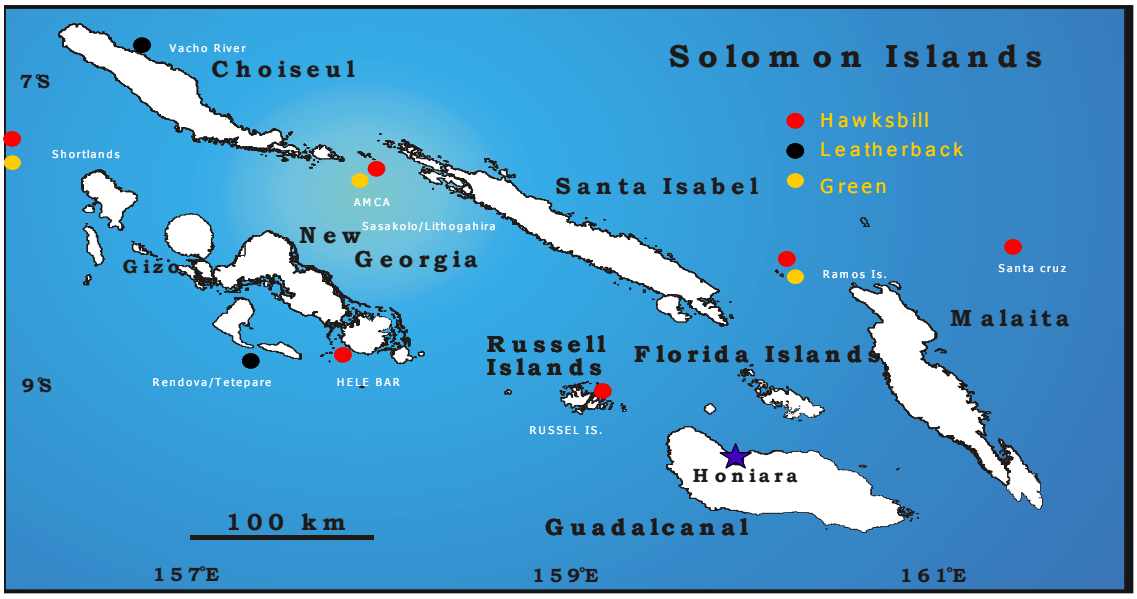

Figure 1: Distribution of marine turtle nesting sites in the Solomon Islands.

This presentation was made by Mr. Peter Ramohia, Department of Fisheries and Marine Resources, Solomon Islands.

- **BACKGROUND**

1970: Seamus McElroy reported dwindling stocks in Solomon Islands
1975 – 1977: Andrew McKeown started tagging in Arnavon Investigations were also conducted in turtle shell trade and nesting areas
1979 – 1982: Peter Vaughan continued tagging and the establishment of the Arnavon Marine Conservation Area (AMCA) wildlife sanctuary
1989 – 1990: Department of Environment and Conservations and the Fisheries Department revisited nesting grounds
1991: Restart of tagging programmes in the AMCA
1997–present: AMCA conservation officers continue programme

- **MANAGEMENT OF TURTLE RESOURCES**

Fisheries regulations have prohibited the export of and trade in turtle shells and associated products since 1992 (National Legislation). This regulation is being amended

and is expected to come into force in January 2005 with heavier penalties. Turtle resources are also managed under Customary Marine Tenure (CMT) systems and relevant provincial ordinances e.g. Isabel Island in the Western Province.

- **MAJOR NESTING BEACHES**

Rookeries that support more than 50 nests per year include:

- Arnavons for Green turtles and Hawksbills (50- 600 nests)
- Shortland Islands:
    - Bagora/Obeani Hawksbills (between 50-100 nests)
    - Balaka Island: Hawksbills (50-100 nests)
    - Ausalala Island Green (up to 200 nests)
- Rendova and Tetepare Islands: Leatherbacks (50 – 150 nests)
- Helebar (Marovo): Hawksbills (50 nests)
- Sasakili/Lithogahira (Isabel) Leatherbacks (50-200 nests)
- Vacho River (Choiseul Island) Leatherbacks (50-100 nests)
- Ramos Island (Isabel) Hawksbills and Greens (50-100 nests)
- Santa Cruz: Hawksbills (50-200 nests)
- Russel Island: Hawksbills (50-100 nests)

- **TAGGING AND MONITORING PROGRAMMES**
    - **Anarvons**: Previously monitored by A. McKeown (1975-1982). Current monitoring is being done by DEC, DFMR and communities. During nesting seasons monitoring includes beach surveys, weekly counts, and rodeo methods for juvenile greens, satellite tracking and genetic sampling.
    - **Sasakolo/ Lithogahira**: In 1993 studies of track counts were conducted. In 1997 a brief visit was conducted by DEC and DFMR to do tagging and genetic sampling. In 2000, the first attempt was made at having longer periods of tagging and monitoring during peak seasons.
    - **Obeani/Bagopa:** In 1991 brief tagging and monitoring programme during peak nesting period were conducted for hawksbills.

- **PRELIMINARY RESULTS**
    - **Arnavon Marine Conservation Area** (Ref. Appendix 5)
        - Mainly Hawksbills and Green turtles encountered.
        - There have been no tags returned from past surveys, probably most if not all turtle mortalities have been for the turtle shell trade. Remigration of turtles has occurred mainly since the mid 1990's. With the turtle shell ban since 1992, this has assisted with the protection of hawksbills.
        - Increased nesting activities in AMCA. In 1970's/80's up to 600 nests per year, however in the early 90's nesting decreased to around 500 per year, but recovered and in the late 90's there were more than 700 nests per year.
        - Hatching success was between 70-85%, with one preliminary calculation putting it at 70-100,000 hatchlings per year based on current nest estimates.
        - Temperature ranges indicate equal numbers of males and females.
        - Natural predation on nests is high and includes crabs, megapodes and iguanas.

    - A small number of green turtle juveniles reside in AMCA due to good feeding grounds
    - Two females have been satellite tracked to Milne Bay (PNG) and the Great Barrier Reef in Australia.
    - Genetic studies indicate that hawksbill populations do not interbreed with those in adjacent Australian waters

- **Sasakolo**
    - Mainly leatherback turtles.
    - In 1993 a total of 25 nests, 7 nesters were tagged for 10 days during a tagging survey (some nesters were unattended due to bad weather).
    - 1995: a total of 25 nesters were tagged, and 83 clutches were recorded over a 40 nights survey.
    - 2000: a total of 27 nesters, 132 nests were recorded over a 52 nights survey

- **Shortland Islands - Obeani/Bagora**
    - 22 hawksbills nesters were tagged over a three week period.

- **SETBACKS AND CONSTRAINTS**
    - Lack of funds thus affecting the consistency of monitoring activities.
    - Lack of trained staff to fully and effectively carry out monitoring work throughout the whole country.
    - Lack of strong coordination and networking.
    - National crisis / tension affecting activities.

- **RECOMMENDATIONS**
    - Need to get organised and establish and strengthen a local network (communities, Government and NGO's).
    - Establish a good turtle database and to properly analyse the turtle data collected.
    - Convince donors to fund long term turtle monitoring work in the Solomon Islands.
    - Continual monitoring of leatherbacks in Baniata, Tetapre, Sasakolo and Lithogahira and Hawksbills and Green turtles in Arnavons, Shortlands and other rookeries.
    - Extend satellite tracking especially for leatherbacks and also include feeding grounds.
    - Share information and experience or learn from other established turtle networks in Melanesia, Pacific region and rest of the world.

1.1.2 Solomon Islands Community Programmes

This presentation was made by Mr. Alan Tippet Bero, Project Coordinator for the Tetapare Descendants Association (TDA), Solomon Islands.

- **GENERAL OVERVIEW**

Tetepare Descendants Association (TDA) was formally founded in 2002, during the height of the ethnic tension. Tetepare Island comprises of approximately 120 square kilometres of tropical rainforest and reefs. The resources are still comparatively intact and generally considered to be in a pristine condition. Tetepare is unique and important as a conservation area as it is the largest uninhabited island in the Pacific Ocean. Consequently thirteen square kilometres of near shore reef area has been made a permanently protected marine area with "no take zone" and could be the largest intact MPA in the Solomon Islands. This MPA provides protection for dugongs, leatherbacks and feeding grounds for green turtles. A field station for researchers and scientists has been established on the island and they are looking to also establish a small-scale eco-tourism enterprise to help supplement the maintenance of the research station. TDA is a registered association with more than 2000 registered members across the Western Province and is also the largest landowners association in the Solomon Islands. The programme is managed by TDA through a local coordinator, lodge staff and rangers with assistance from project managers based in Australia and on the island through the Canadian Volunteers programme.

- **TURTLE MONITORING PROGRAMME**

Baniata and Havila communities are on the neighbouring Island of Rendova and have also adopted a turtle conservation programme. Baniata has approximately a 6 km stretch of beach that is important for leatherback nesting and communities here have always eaten the meat and eggs of these turtles. The leatherback turtle conservation project began in September of 2002 when some of the communities members who are also part of the TDA, approached the Tetapare coordinator to assist with the establishment of these areas as a protected area. With funds from the EU and NZAID and in close working relationships with WWF Solomon Islands, several awareness programmes have since been conducted. These include discussions to reduce the collection of turtle eggs, using religion as bases for the non-consumption of turtle meat and eggs and the initial development of a small tourism venture to provide alternatives to collecting eggs for school fees and other community needs. As these communities are really good carvers and gardeners, TDA is also looking at ways to further help them improve their livelihoods. Some small monetary initiatives are also offered to community members to monitor egg nests during the peak-nesting season.

- **Preliminary monitoring survey results**
  - In 2003 – 2004, there were 235 leatherback turtle nests recorded of which only 14 hatched. The low success rate has been attributed to entanglement in nets, inundation from high tides and dog predation.
  - Documentation shows that leatherbacks nest exclusively on the black sand beaches of Havila and Baniata, whereas greens and hawksbills nest on the white beaches of Rendova.
  - Specific recording sheets designed with photos are taken during the nesting period and data collected on the nesters during peak turtle nesting seasons. A written report is available on TDA website.

- Enforcement and monitoring on Tetepare is conducted by rangers on a weekly patrol and at Baniata and Havila, the villagers are right next to the beach so have assigned community monitors
- TDA would be very interested to hear from participants on how eggs are relocated as they feel this is one of the big factors in the low success rates of hatchlings.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

What do they do with the hatchlings they hatch? **ANS:** Most of them are released; some are kept in basins until they're bigger.

What's' the peak season? **ANS:** Begins in late October and can go through to January

On the question of **egg relocation,** Vagi Rei (Department of Environment and Conservation in Papua New Guinea) explained that they had trialled moving eggs to higher grounds, however it was a difficult process as temperature affects the incubation period and there was only a short time frame to move the eggs once they had hatched. Ground creepers also were hazards to hatchlings, as they tended to cover the ground and make it difficult for the turtles to crawl out of their nests.

1.2 PAPUA NEW GUINEA

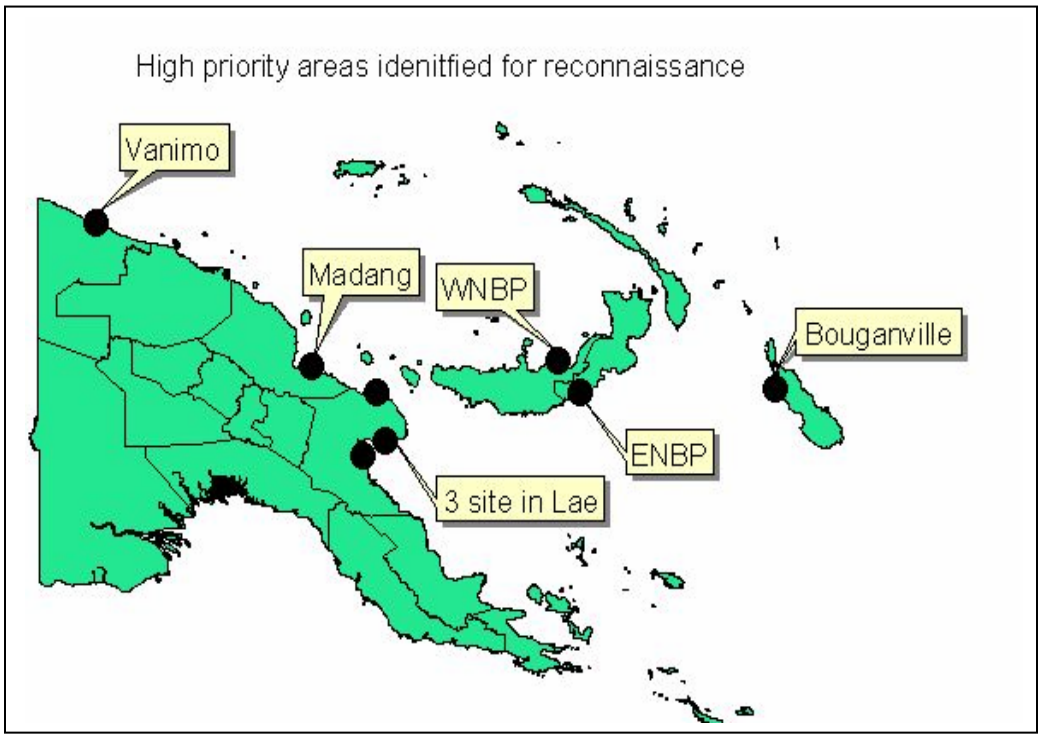

Figure 2: Major Marine Turtle Distribution sites in Papua New Guinea.

This presentation was made by Mr. Vagi Rei, Scientific Officer, Department of Environment and Conservation, Papua New Guinea.

1.2.1 Papua New Guinea Country Status

- **BACKGROUND**

In PNG the marine turtle research and protection programme started in 1977 and was funded by UNDP-GEF. The objectives of this programme were to:

- Provide turtle protection;
- Map the distribution and abundance of turtle species in PNG;
- Evaluate the cultural values and subsistence uses of marine turtles;
- Provide education on biology of the turtles and the need for conservation.

The programme concentrated on all the 6 species (leatherbacks, hawksbill, green, loggerhead, Olive Ridley and the flatback) that exist in PNG. The main areas where research was concentrated were in the Southern, Northern, Eastern areas and New Guinea islands.

Results from the study indicated that hawksbills and green turtles were widely distributed and leatherbacks were mainly concentrated along the North coast, New Britain Islands and Bouganville. Other species were not common and although there were sightings of loggerheads, there was no confirmed rookery. Long Island in the Madang Province is the only documented site for greens and hawksbills in PNG, although they occur throughout the country.

- **MANAGEMENT**

The Papua New Government position on marine turtles and natural resources is reflected in its mission *"To ensure natural and physical resources are managed to sustain environmental quality & human well being*" and in its Fourth National Goal which states *"PNG's natural resources and environment should be conserved and used for collective benefit and should be replenished for future generation*". Other significant policies for marine turtle protection include the *Fauna (Protection & Control) Act* and listings under CITES Appendix II.

- **LEATHERBACK TURTLE TELEMETRY and TAGGING IN PNG**

The leatherback turtle-monitoring programme started in 1999 with the Kamiali Wildlife management area (WMA) and the peak session is usually from the months of October – through to March. This programme is a collaborative venture between DEC, Village Development Trust, NOAA-US-NFMS and SPREP (C-SPOD). Since 2000, 86 Leatherback turtles were tagged and 10 satellite devices deployed. (00-17, 01-21, 02-39, 03-29). Turtle data collected includes the tag number, date of birth for the hatchlings, egg numbers and success rate (after 62 days). For a monitoring station, Kamiali and the Huon network sites may produce valuable information on leatherback migratory routes and ecology in the future

Other methods used to collect data include:

- **PIT tags** (Passive Integrated Transponder). NOAA provided tags and training and now community monitors are carrying this out. Scanners similar to that used in supermarkets are used to identify the serial number on the tags.

- A PIT tag is about the size of a matchstick and is inserted into the shoulder of the Leatherback with a syringe. This is quite an expensive method mainly because of the scanner and so metal tags are also used, as there is more community interest in the information gathered from the metal tags.
- Leatherback nesting females will not move during the process of egg laying even if disturbed and it is at this point that the satellite tags are put on.
- Tags are put on the hind flipper as it is a much better location than the fore flipper as they appear to be less problematic for the turtle when swimming nor does it attract sharks or restrict movement while digging up nests.
- Close to 29 turtles were PIT tagged in 2001 and it is hoped that this year these turtles will return. All other turtles scanned in 2003, were recently tagged turtles.
- Collection of blood samples for genetic identification and a manual had been put out in 2002 regarding this activity. Skin samples are taken from the hind flipper.
- Community members and DEC staff have received training in the deployment of satellite devices and DEC staff have received training in aerial survey techniques.

1.2.2 Papua New Guinea Community Programmes

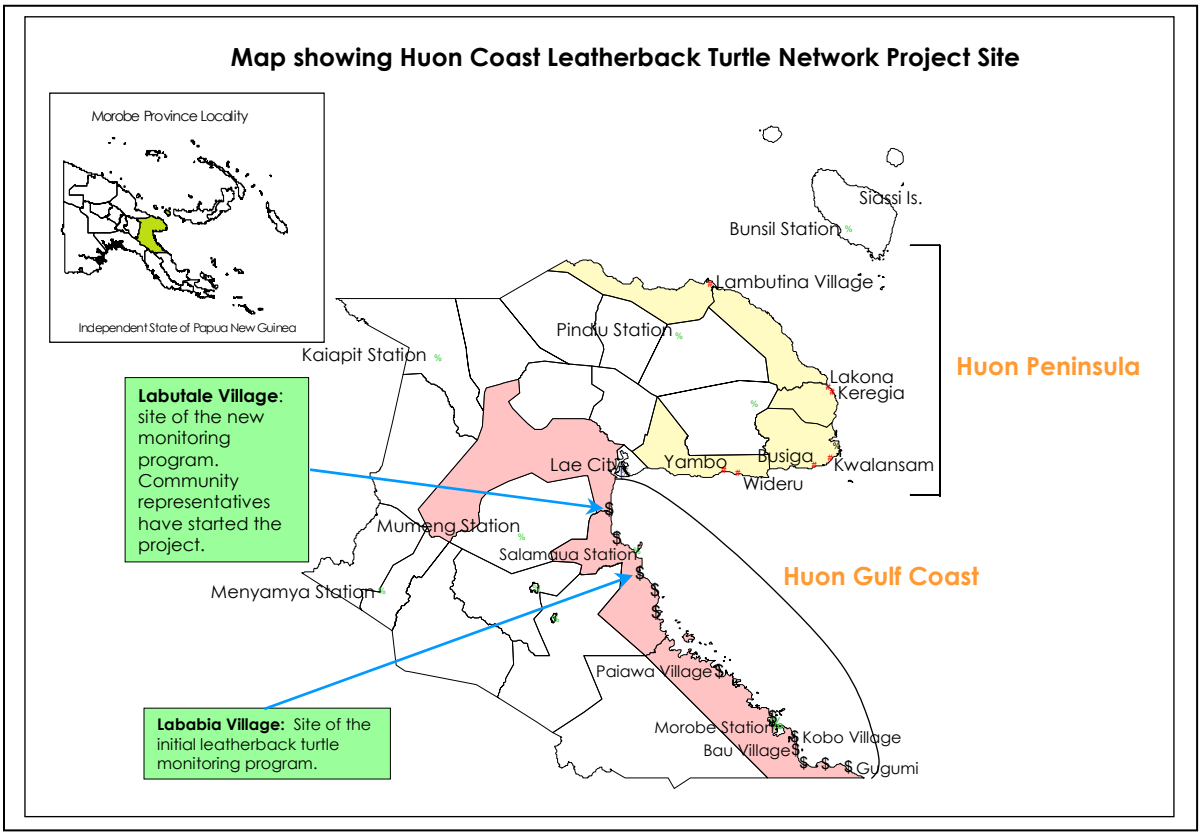

Figure 3: *Community based sites along the Huon Coast*

- **KAMIALI INTEGRATED CONSERVATION DEVELOPMENT GROUP (KICDG)**

This presentation was made by the KICDG Assistant Project Coordinator, Mr. Collin Naru.

- **GENERAL OVERVIEW**

  In 1996, the Kamiali Wildlife management area (KWMA) was gazetted under the Flora & Fauna Act. Recent research conducted in the KWMA indicates new terrestrial species and is a hotspot for leatherback turtles in PNG. The Kamiali WMA area is located along the Northern coast of the Papua New Guinea mainland, 60 km southeast of Lae - Morobe province. The WMA covers an area of 47, 414 hectares and encompasses large areas of coral reeds, seagrass meadows, coastal and river mangroves, sago and pristine rivers, estuaries, inland freshwater lakes with catchments that are still covered with primary rainforest and back beach brackish waters. The Kamiali WMA also includes an 8 km beach that is one of the principle nesting sites for leatherback turtles in Papua New Guinea. Monitoring of leatherback turtles has been ongoing since it was initiated in 1998 by the Village Development Trust (VDT), a national NGO based in Lae. Previous studies have mainly been botanical in nature. The project is coordinated by Mr Karol Kisokau out of a small office in Lae. Community leaders engaged in monitoring include Michael Yaling and Levi Ambio (community leaders), and Manasa Tusi (biologist within the community). The participants at this workshop are hoping to share their ideas and knowledge as well as take back to their communities new lessons and ideas learned.

- **TURTLE MONITORING PROGRAMME**
  - During the nesting season there is a Moratorium on egg harvesting throughout the 8km stretch. Of the 8km-nesting beach, local scientists from the Lababia village monitor only 2 km.
  - A turtle sighting camp is set up half way along the 2 km stretch and patrols commence at dusk with two people walking on foot along the nesting beach with portable two-way radios. Once a turtle is sighted, the base camp is alerted (detailed methodology is described in Rei *et. al* 2004).
  - SPREP, DEC, NOAA have been the main partners supporting VDT and KICDG.
  - Records are kept of numbers of actual egg laying turtles, time and date, tag number, carapace measurements (length and width) number of eggs and nest temperature.
  - Other information collected include environmental data, nesting behaviour, phase of the moon, and later the emergence success of hatchlings
  - Tagging devices used include SPREP tags, DMK / Satellite tag, PAT tags (Pop UP Archival transmitter) and PIT tags (Passive integrated transponder) (Rei *et. al* 2004).
  - Recent monitoring programmes in collaboration with NOAA, DEC and SPREP have included aerial surveys, ground-truthing, satellite monitoring and genetic sampling.

- KICDG and SPREP with DEC have also been conducting awareness programmes by talking to communities about the importance of leatherback turtles.
- A community eco-lodge and conference centre was established as a part of this programme and is also a means of bringing benefits to the community.

- **Preliminary monitoring survey results**
  - A total of 43 turtles were observed and tagged during the 2002-2003 nesting season. The nesting period begins in November and ends in March with the peak months being that between December and January.
  - From an observation of 4 nests, 170 hatchlings were observed from a total of 520 eggs that were laid. Of the 520 eggs, 60 of the hatchlings died while the other remainders were all bad eggs that did not hatch for unknown reasons. Genetic samples were collected for further analysis.
  - Although previous PIT tags had been administered during the earlier seasons (2000-2001), none of these particular turtles returned, and it could be assumed that these turtles will return after 3 years based on leatherback turtle biology.
  - Community members are concerned that there is a decrease in nesting turtles despite their efforts and accounting for natural predation (dogs, crocodiles and monitor lizards), beach debris/coastal vegetation that hinders nesting efforts, tidal inundation.
  - Another factor affecting migrating populations could be from long-line fishing fleets in offshore waters.
  - Preliminary satellite data indicates that important inter-nesting areas include the southern part of New Britian Island, Bougainville to the east and the Milne Bay-Oro connection on the South. Other turtles have been recorded as far as Madang, and through the passage between Finchafen and Cape Glouster (Kisokau, *pers comm.*).
  - Migratory routes indicate that leatherbacks travel past the Solomon Islands, New Caledonia and Vanuatu and one even went south to New Zealand.

- **HUON COAST NETWORKING PAPUA NEW GUINEA**

This presentation was jointly made by Mr. Philemon Tomala, (Huon Coast Network, Network President) and Mr. Vagi Rei (Scientific Officer, DEC). *(Ref. Appendix 6)*

- **GENERAL OVERVIEW**

Six nesting beaches have been identified along the Huon Coast, Kamiali is one and a second site adjacent to this is at Labutale Village where an awareness programme has just commenced to be followed by monitoring during the 2004-2005 nesting season.
The Vision for this community and hopefully other communities where leatherback turtles are known to nest is that:

> *The leatherback turtle population in the Morobe province is increased and maintained at viable level, for the benefit of our present and future generations".*

Beginning in the 1980's, the University of Technology in Lae started a conservation programme that was later taken up by VDT who started the programme in Kamiali. Since then, with support from DEC, community members have decided that there was a need

for a Huon leatherback turtle network comprising of all communities who own beaches where leatherbacks are known to nest. In the future it is hoped that this network would combine with the Kamiali network, to provide a continuous protected area for the majority of nesting leatherback turtles in Papua New Guinea.

- **TURTLE MONITORING PROGRAMME**
  - Reasons for starting this network include how leatherback turtles nest along the entire Huon coast where ever there is suitable substrate. Consequently, the area of beach that needs to be protected needs to increase. The involvement of local people through awareness programmes is very important for the long term ownership and success of the programme.
  - Through a series of workshops and with support from DEC, a network comprising of members of the community from each village where leatherback turtles are known to occur has been initiated. Most of those here at the workshop are members of that network.
  - So far communities have used their own resources to conduct their own awareness activities. This also includes sleeping on the beach during the last turtle season.
  - Awareness programmes have been conducted by Moses Jerry of Labutale Village and Baruga Jarau, a Councillor for Kobo Village. They have used videos from the Wan Smolbag Theatre group, and have also taken communities to nesting and non-nesting beaches for practical sessions in their awareness programmes.
  - Most of the audience targeted are school children, with the objective of equipping them with knowledge.
  - A local drama group, Schneider Theatre Group also does awareness.
  - VDT currently coordinates turtle monitoring.

- **QUESTIONS AND COMMENTS ON PRESENTATIONS**

What is the hardest part of the programme? **ANS**: Turtle eggs are a subsistence food for communities and it takes a long time to convince a person that turtles are important to conserve. We are currently trying our best to make them aware that the turtles need to be conserved for the future, however it is a long process and needs more time.

How many nesting turtles do you think there are on the beaches based on the initial tagging programmes with the community? **ANS**: Kamiali has the longest experience with tagging turtles and they would be the best people to talk to. A report has also been prepared based on the Kamiali experiences with community and NOAA monitoring programmes. A request was made from the floor to have this report photocopied and available for the group.

Vagi Rei from DEC also provided a brief summary of the report – *Tagging and monitoring started in 1999, when about 7 turtles were tagged on a beach a little over 2 km. In 2000, with SPREP support, they tagged about 19 turtles, in 2001; this went up to 25 turtles, in 2002 – 22 turtles, 2003 – 28 turtles. Based on these results they believe that new mothers are coming up. They also expect that after 3 years, they should see the*

turtles that were tagged in 2001 coming up to nest. An average population could be about 12 turtles.

How do you know when the turtles are coming up? **ANS:** There are patrols on the beaches every night. There's a 'houseman' (in the village) with the patrols happening from 9am – 5pm – from houseman to houseman. There has been support from NOAA to help out with this project. Little incentives are paid for subsidising their time on the beach. The second group (Huon Network) has also been supported from NOAA.

1.3 Birdshead and Kei Islands, Papua, Indonesia

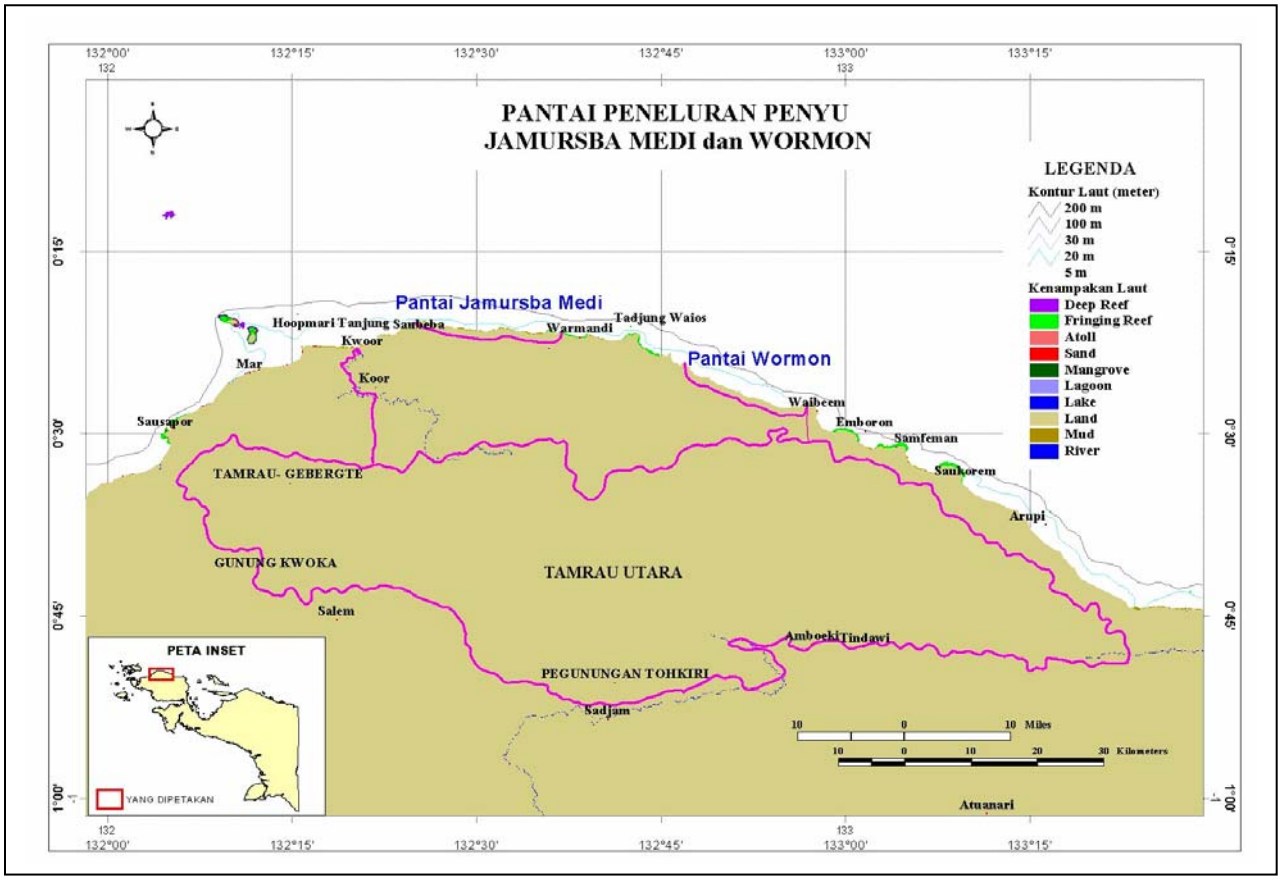

Figure 4: *Major leatherback turtle nesting sites in Papua, Indonesia.*

1.3.1. Papua/Indonesia Country Status

This presentation was made by Ms. Creusa Hitipeuw, WWF Indonesia Species Coordinator.

- **GENERAL OVERVIEW**

The WWF Indonesia leatherback turtle conservation programme has two main components *a)* habitat protection for the two main leatherback nesting beaches around the Birdshead area (Jamursba Medi and Warmon, of Papua and *b)* the reduction of mortality at their foraging grounds due to traditional hunting practise (Kei Islands, Maluku). A

fairly new initiative has been the investigation of ways to reduce by-catch from coastal and inshore fisheries around the breeding habitats and foraging grounds of Papua. The lack of formal protection status for nesting habitats in Jamursba Medi makes it difficult to get across-the-board protection, for example conflicts between a log-pond construction and protection of the beach as a nesting site. Fortunately, further development of facilities within the managed beach was not successful due to the commitment of local communities to protect their beach. Maps are a good advocacy tool and have resulted in creating greater awareness amongst relevant Government Departments which together with greater international recognition (e.g *Bellagio Call for Action*) has resulted in the Indonesian Government pledging to protect the most important remaining nesting beach for Western Pacific leatherback turtles at the recent COP-7 Convention of Biodiversity in February 2004. WWF works in collaboration with NMFS-NOAA to conduct management related research such as satellite tagging and genetic sampling. Capacity building programmes are also conducted with local universities and NGO's and during the last two peak-nesting seasons, two national university students were included as part of the monitoring programme.

- **TURTLE MONITORING PROGRAMME**
  - Jamursaba Medi was first known in the early '80s to be a large leatherback-nesting beach. Previous records indicate over 15,000 nests, especially during the peak months. There are two different nesting seasons - Jamursba Medi peak seasons are June and July and Warmon peak seasons are January and February (Southern hemisphere).
  - Conservation activities began in 1993 though initially it was mainly to prevent poaching with rough data collections of nesting numbers. In the last two years, standardized monitoring has been possible through NOAA and other scientific institutions.
  - A simple monitoring programme that integrates night patrols with satellite tagging is used to provide a general estimate of nesting females on the beach and information on inter-nesting activities. PIT tags and satellite transmitters are used to monitor migration patterns. Daily beach patrols are conducted by trained personnel to record nesting activities and to prevent poaching and predation
  - Cultural relevance of the leatherback turtles for the people of Abun land include beaches owned by clans and although poaching of female turtles is taboo, harvesting of eggs is allowed.
  - In response to the economic needs of the communities, community consultations and awareness raising programmes, linked to finding alternative livelihood options are fundamental to the long-term sustainability of this programme and community ownership.
  - Without commitment from the communities, this project cannot work and this idea was used to gain publicity for the project from local and international media (FUJI TV Japan) for both conservation objectives, but also to provide an opportunity for the communities to profile their village. The use of maps showing migratory patterns from satellite data has been used to create greater awareness at local, national and international levels

- **Preliminary results from monitoring programme**
  - Based on data sets for the two monitored beaches, approximately 1000 females nested per year during the nesting seasons of 2002 and 2003 (Jamursba Medi) and 2003 (Warmon).
  - Latest surveys have shown a decline of 75% since the 1990's.
  - Main threats include: egg harvests; feral predation (wild dogs; monitor lizards; dogs); habitat degradation (land based erosion which has turned most of the beach into ponds).
  - With beach protection, there has been noted success (poaching, predation) but other issues recently raised include threats to nesting habitats from coastal/private sector development and threats related to fisheries and by-catch.

1.3.2 Papua (Indonesia) Community Programme

Figure 5: *Kei Island Project Site*

- **KEI ISLANDS - TRADITIONAL HUNTING OF LEATHERBACKS**

This presentation was made by Mr. Julius Lawalata, Community Project Coordinator, Indonesia. *Ref. Appendix 7.*

- **GENERAL OVERVIEW**

The project site is located on the southwest of Kei Islands in the Maluku province of Papua, Indonesia. The area where we are working comprises of nine villages with

approximately 4,500 people organized under the customary federation called NuFit. Leatherback turtles are locally known as *"Tabob"* and have traditionally been hunted for generations for both subsistence and ritual purposes. Previous studies by Suares (1999) estimate the take to be as high as 100 leatherbacks per season. Lack of protein resources from the forests (e. g deer, pigs and birds) and the increase in population are suspected to be the reasons behind traditional hunting. There is also a traditional perception that an ancestor brought leatherback turtles to Kei Islands from Papua and so the people need to show their gratitude and utilize this gift, as it will always be there. Kei Islands have also been scientifically identified as key foraging grounds for the globally endangered juvenile leatherback turtles during the months of October through to March when jellyfish are plentifully in this area. The challenge now is to integrate these two components into a workable management framework that ensures conservation targets and community aspirations are both archived through a sustainable programme that is implemented by the communities themselves.

- **TURTLE MONITORING PROGRAMME**
  - Initially the programme started from data collection on harvest levels as a baseline to measure the success of this programme
  - This data was then used to develop field strategies and form the project work plan for community organization and empowerment activities.
  - Community consultations using participatory methods were then conducted supported by information materials such as films, maps of migratory paths, booklets and other communication tools
  - Instrumental was the need to build on cultural values and ensure that customary institutions were the platforms to move this project forward
  - Staying with the village community and building trust within the community were just as important as collecting data on harvesting levels

- **Preliminary results of the programme**
  - From the initial work done, it has been identified that to reduce harvesting pressure, there is a need for quick economic interventions, especially in areas where the human population is high and increasing.
  - An assessment of existing local livelihood activities determined that to initiate the development of livelihood support options the following issues need to be addressed: *a)* transportation to allow direct access to the nearby town market, *b)* capacity building of community skills to intensify or increase diversity of cash crops to substitute income generation during the normal hunting season and *c)* need to increase skills in home industry management.
  - So far communities have accepted WWF activities and programme and there is a greater understanding of leatherback conservation and its relation with local beliefs (legend).
  - A local initiative to hold a customary leaders consultative meeting, resulted in 13 action plans regarding hunting regulations mechanisms and natural resources management within NuFit customary area and a local steering committee is being established to move these action plans forward, for example training on village regulations produced draft hunting regulations.

- **Lesson learned**
  - Conservation and community targets are often two different things, therefore, there is a need to integrate the two targets into the same framework.
  - Conservation messages should be packaged with local perceived values and conservation issues should be addressed through overall natural resource management issues to gain local interest.
  - Development of local regulations are critical but individual awareness is the final goal and in developing legal formal regulation, local perceived values should be considered to generate ownership of both rights and obligations.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

Can you give us some idea of the size range of turtles that are being captured? **ANS:** Small around 50 cm (CCL) to over 160 cm CCL – thought that it might be a feeding ground for juvenile.

How do you deal with the issue of believing that it's a resource that can't be depleted because it's a gift? Any luck with finding ways that can convince people that the resource can be depleted? **ANS**: Using information from other sites that show how populations have been depleted. Also obtaining information from them on what it was like before compared to now, staying with the community is a crucial element for building trust and raises their awareness.

1.4 Vanuatu

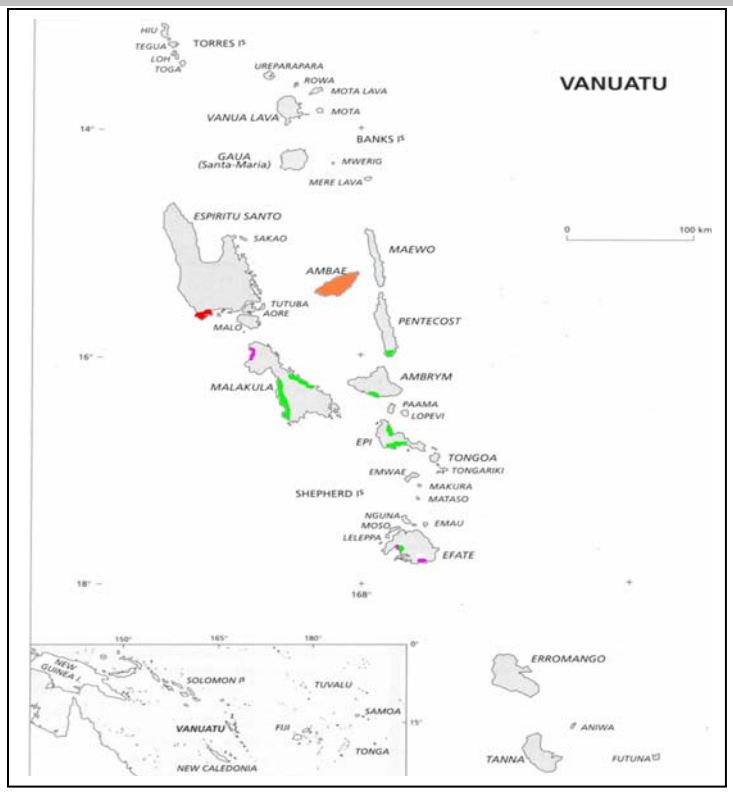

Figure 6: *Marine turtle nesting sites in Vanuatu.*

This presentation was made by Mr. George Petro, Coordinator Vanua-Tai monitors, Vanuatu.

1.4.1 Vanuatu Country Status

- **GENERAL OVERVIEW**

The turtle monitors network programme was established in 1995 to mark the Pacific Year of the Sea Turtle, coordinated by SPREP. The first activities were to determine what communities knew about marine turtles and a programme was started in Efate. Based on information generated from community consultations, a turtle play was produced by Wan Smolbag called "*Me wan turtle*" which covered the life history of turtles. The play was then performed for the community and based on this presentation the community decided to establish a turtle-monitoring network. Support from SPREP (through C-SPOD) provided tags and organized training workshops for the monitors. From 1995 to 1996 the programme remained around Efate, but expanded to the outer islands in 1997, in recognition of the wider areas covered by the turtles. Latest monitor groups include islands north of Efate and Pentecost Island. In 2001, there was a change in name, to Vanua Tai monitors (in recognition of the connectivity of land, rivers and seas) To date, there are approximately 200 turtle monitors that cover about 70% of the country from north – south.

- **TURTLE MONITORING PROGRAMME**

The breeding season for leatherback turtles in Vanuatu is from October to March. Specific research on leatherback nesting sites was first conducted during the 2002-2003 season, and also covered other turtle species. Objectives of this survey were to *a)* assess numbers and species, tag nesting turtles and *b)* determine the numbers of nesting turtles and hatchlings. Community awareness programmes were also conducted to assess threats at nesting sites and raise the community awareness regarding the endangered status of leatherback turtles.

Current monitoring activities include:

- Assessing population trends (increase / decrease), feeding grounds and nesting sites (greens / hawks) and their mortality rates.
- Tagging and data collection using SPREP monitoring sheets which are returned to the Wan Smolbag office to be passed on to SPREP and the Department of Environment.
- Working very closely with village chiefs / councils to establish turtle taboos which if broken can mean a fine being paid.
- Communities / individuals being assisted in setting up MPA's.
- Raising community awareness on fisheries regulations with fisheries officers who assist with training workshops. The programme also works with these officers to enforce fisheries laws.
- Turtle patrols for monitoring at night and during the day nests are counted and marked.
- Monitoring hatchling numbers as they emerge from the nests.

Awareness activities include:

- Plays and drama performed for communities with the occasional performances for the public. After the play discussions are encouraged.
- Radio spots, videos, posters, turtle boards with the slogan *"Lukaotem ol totel blo fiuja blong yumi*", workshops, school visits.

- **Preliminary results of the programme**

  - The 2002-2003 survey produced the following results:
    - Green turtles: 15 nesters, 10 false crawls and 2 tagged;
    - Hawksbill turtles: 2 nesters, 3 false crawls and none tagged;
    - Leatherback turtles: 31 nesters, 5 false crawls and 9 tagged.
  - **Successful aspects** of the programme include:
    - Awareness raising, turtle taboos and bans, monitors workshops and community support.
    - Eco-tourism activities around turtle programmes where communities can earn some small amounts of money
    - Establishment of community based marine protected areas and conservation areas
    - Video documentary
    - Government regulations which prohibit trade in turtle products (Vanuatu is a signatory of CITES) and having a National Biodiversity Strategy and Action Plan (NBSAP)
  - **Challenges** of this programme include:
    - The voluntary nature of the turtle monitors programme
    - Turtles are still being killed because of traditional practices for example those associated with the harvest of the new yams (Southern Malekula)
    - Funding for the overall turtle monitors programme

- **FUTURE RECOMMENDATIONS**
  - Monitor the network to cover the whole country and a regional network linked with other Melanesian countries.
  - Female monitors to be introduced, as at the moment, there are only male monitors.
  - Conduct further research on nesting sites, to build on the trial 2002 survey.
  - Work with the Fisheries Department to amend existing national turtle laws to include size restrictions and introduce quotas on harvesting turtles especially for traditional ceremonies.
  - Although only 9 leatherbacks were tagged and there are few known nesting sites, Vanuatu would like to have more work conducted on leatherbacks in the future such as aerial surveys, training on PIT and satellite tagging methods and yearly beach surveys

1.4.2 Early Scientific Knowledge of Turtles in Vanuatu

This presentation was made by Mr. Francis Hickey (Vanuatu Cultural Center) and Mrs. Donna Kalfatek (Environment Officer, Department of Environment, Vanuatu). *Ref. Appendix 8.*

- **INTRODUCTION**

There was not much known by Government on the status of marine turtles before Independence in 1980. In 1982 initial report notes that green and hawksbill turtles were the most common species with small numbers of Leatherbacks. Olive Ridley's and loggerheads were considered rare. There was also the uncertainty as to whether leatherbacks nested in Vanuatu and if so, where? The first real progress came with the establishment of the Regional Marine Turtle Conservation Programme (RMTCP) by SPREP in 1989. All the countries within the SPREP region adopted this programme, with annual meetings held at SPREP starting in 1990.

- **Early work of Environment Unit as Focal Point for RMTCP**

Driven by the RMTCP, in 1989 a countrywide postal questionnaire survey was conducted to determine the species present in Vanuatu, along with the geographical location, location of important nesting areas, and population estimates. Based on this report, four species were identified for certain to be located in Vanuatu (green, hawksbill, leatherback and loggerhead). The study also revealed that green and hawksbill turtles were subject to heavy exploitation in some islands like Malekula, while elsewhere there seemed to be little or no pressure on these resources.

Location	Turtle Species	Location	Turtle Species
Banks/Torres	Hawksbill	Malekula,	Green; Loggerhead, Hawksbill
Santo/Malo	Leatherback; Green	Epi, Green	Hawksbill
Aneityum	Hawksbill	Santo and Pentecost	Leatherback

Table 1: *Important nesting sites in Vanuatu*

- **Government support given through the Environment Unit included:**
  - Enforcing CITES resulting in the control of trading of CITES listed species.
  - Listing all marine turtles as species of conservation significance under the Vanuatu National Biodiversity Strategy and Action Plan (NBSAP).
  - Establishing an MOU with the Vanuatu Association of Non-Government Organisations (VANGO) where it recognizes that NGOs are able to work in areas that the Government does not have the capacity to work on.
  - Supporting Wan Smolbag to continue taking the leading role in the turtle-monitoring programme.
  - The Environment Management and Conservation Act No.12 of 2002 provides provisions for making regulations to control the taking and export of species of conservation significance e.g. endangered, rare, or endemic species.

- **FISHERIES TURTLE REGULATIONS:**
  - Protection of turtle nests and eggs (Department of Fisheries) interprets this to also include protection of nesting turtles.
  - No buying and selling of hawksbill carapaces.

  - **Challenges with the Fisheries turtle regulations are**
    - Limited monitoring and enforcement of fishing regulations, including for turtles, due to financial and human resources constraints.
    - No Fisheries Enforcement Officer on staff for some years.
    - Fisheries rely mainly on Community Based Management of turtles.

1.4.3 Community-Based Resource Management: Overview and Trends

This presentation was made by Mr. Francis R. Hickey, Vanuatu Cultural Center. *Ref. Appendix 9.*

- **INTRODUCTION**

Vanuatu is a land of high cultural diversity with over a 100 different languages. Women and children are also fishers of the village and go out at low tide. There are many taboo's and customary practises associated with harvesting of marine resources, for example when setting traps for lobsters and crayfish, men are not allowed to drink *kava* (grog) or sleep with his wife. These practises are slowly declining with the introduction of modern fishing gears and techniques.

- **THE "PAST" TRADITIONAL MANAGEMENT STRATEGIES**

Traditional management systems were developed to protect resources, and under customary marine tenure (CMT) village chiefs could restrict access to reefs and/or parts of the reef. There was also a high respect for ancestral totems, which were taboo to eat, and rules and behavioral practices associated with different fisheries. Taboos were also placed on a particular favorite food of a deceased person if they were of high status. Other traditional practices also included seasonal closures and taboos on certain foods such as turtle meat and eggs and lobsters. Clam gardens improved the reproductive success of these species and area closures during the death of a traditional leader also protected marine habitats, which could extend to include networks of islets and reefs. Rules of practices relating to customs and traditions were handed down and combined to act synergistically. Many of these systems are still in effect in some areas and today those that are rooted in *kastom* are the most effective e.g. the use of special leaves to block off the use of a reef or stop the harvest of turtles during the nesting season.

- **THE "PRESENT" INDEPENDENCE IN 1980 LEGAL PROVISIONS FOR CUSTOMARY MARINE TENURE (CMT)**

Since Independence in 1980, legal provisions under the Momma Law stated that "All land in the Republic of Vanuatu belongs to the indigenous custom owners and their descendants"…" The rules of custom shall form the basis of ownership and use of land in the Republic of Vanuatu"…. "Land" includes… land under water including land extending to the sea side of any offshore reef but no further. Consequently as CMT is now legally enshrined, it provides the essential foundations for village based resource

management in Vanuatu and communities have control and authority over land and marine resources as it was traditionally.

- **CONTEMPORARY ADAPTATIONS**

In the early 1800's commercial harvest of trochus, green snails and beche-de-mer had all but wiped out these species. Taboos were then adopted to restrict harvesting of commercial resources, however over time, economic pressures from increased human populations and introduced modern fishing gears resulted in the erosion of *kastom* practices. Today, a cooperative management system that combines both traditional practices with data from scientific biological surveys is being encouraged. Eco-cultural tourism ventures that will both protect resources and increase tourism revenues are also being promoted to help revive *kastoms* through dances, songs, crafts etc.

Recent research on the effectiveness of traditional marine tenure has shown that in the 21 villages surveyed in 1993 and 2001, taboos and bans had more than doubled when compared with an 8 year period prior to the survey. Many turtle taboos were introduced after the Wan Smolbag awareness programmes began in 1995. The report also indicated that providing biological information on trochus and turtles helped build the capacity of communities to understand the life cycles of these species and resulted in the adaptation of traditional systems to support marine resource management (Co-operative management). Recommendations from this report included:

- The need to promote wider awareness of fisheries regulations (e.g size limits) so that communities and chiefs can better understand the rationale behind these regulations thus enabling them to monitor their own resources.
- Awareness activities targeting important species such as trochus and turtles.
- Phasing in more complex integrated coastal management programmes once communities have seen the benefit of their own conservation and management strategies on single species

- **THE "FUTURE" OF COMMUNITY BASED MANAGEMENT (CBM)**

  - Encourage donors and Governments to recognize the value of CBM and support traditional management systems and use of traditional knowledge.
  - Build community capacity to adapt traditional systems to contemporary needs through awareness and cooperative management.
  - Integrate values and use of traditional knowledge and environmental awareness into educational systems targeting youth.
  - Support Wan Smolbag and Vanua Tai resource monitors to advise/support CBM.
  - Recognize limited capacity of Government to centrally manage resources and avoid shifting responsibility to Governments.
  - Diverse nature of western court system -"*nakamal*".
  - Need to balance modern pressure and development with biodiversity and cultural preservation issues.

If communities can not manage their own resources then nobody can.
Francis Hickey

- **QUESTIONS AND COMMENTS ON THE PRESENTATIONS**

When reading reports on Leatherback turtles, there is no mention of Vanuatu? **ANS:** Most of the information is gathered through turtle monitors and the community and with the results of the 2002 survey this should put Vanuatu on the map as an important leatherback site.

How do turtle monitors get information back to the central office? **ANS**: There are tagging forms that are sent out and once filled, they are then sent back to the head office.

Any measure on how the number of resources has changed e.g increased? **ANS:** No biological surveys so far. However with the turtles, trends suggest that they are more visible and are also showing up in areas that they might not have frequented before. Animals also allow you to approach them more closely and there is a noticeable dramatic difference in their behaviour. There is more anecdotal information than scientific data.

Is there a danger that the chiefs might think the taboos are obsolete with the increasing number of turtles? **ANS**: It may be better to save the resources now and then evaluate the resources at a later date, management can be adaptive supported by scientific data. Might be able to use this practice for other resources. Also, people aren't stopped entirely, they are allowed to take if it's for a special occasion with the permission of the chief.

- **COMMENTS FROM THE TURTLE MONITORS**

Donald James Aromalo: I've noticed changes since the start of the programme. Turtle numbers have increased and the captured turtle numbers have decreased. There's also been a lot of anecdotal information to suggest that there are a lot more turtles now. In the villages, taboos are put up and if broken there are fines to be paid back to the community. The numbers of leaves that are placed to mark management areas also indicate the price of the fine. For landowners, they are an important component to work with.

Charlie Manua: Advantages of an eco-tourism project where one can now snorkel with turtles and watch them feed. So instead of eating the turtles, tourists now will gladly come and snorkel with turtles and dugongs, which is a major attraction. Dolphins and whales also pass through this area so it has a lot of potential. The value of protecting turtles in Vanuatu and the successes through Wan Smolbag has been documented by Francis who is recording some of these experiences. "People are saying that it's incredible the numbers of turtle that are being seen".

SESSION 2.0
ENVIRONMENTAL CONSERVATION & COMMUNITY EDUCATION

Figure 7: *Participants from PNG.*

2.1: Community Education: Principles and Ideas

The objective of this session was to invite communities to present and discuss the types of tools that are being used in the community during community education programmes. This session focused on the various tools and programmes that are currently being implemented, which approaches were successful in the different communities and what further resources are required to improve community education delivery. This session was chaired by Jackie Healy, WWF Solomon Islands, and consisted of a series of community and NGO presentations to set the scene, followed by breakout country discussion groups and concluding in plenary.

2.1.1a Reaching Ecoregions Approach the Solomon Island Way

This presentation was given by Mr. Bruno Manele, Marine Officer, WWF Solomon Islands. *(Ref. Appendix 10)*

- **INTRODUCTION**

The goal of WWF Solomon Islands is "*to support Solomon Islands People to conserve and sustainable manage our natural inheritance for present and future generation*". WWF Solomon Islands is part of a larger Ecoregion[5] conservation programme that covers PNG and Papua (Indonesia). However, to build the foundations of this programme, we need to work with local communities at the village level and in the village context if the conservation message is to be acceptable to the community and ensures that the idea is

[5] Ecoregion: Large units of land or water that contain geographically distinct species, habitats and processes.

theirs – the concept of "ownership". WWF SI has been trying to do community education the 'Pacific way' through a number of programmes that are based on using the participatory rural appraisal (PRA) workshops approach. These include:

- Community based marine protected area programmes (Gizo, Tetapare in partnership with TDA), habitat baseline studies, coral reef monitoring programmes (Global Coral Reef Monitoring Network methodology) and spawning aggregation studies.
- Turtle conservation area programme:
    - Working in partnership with TDA and the Tetapare Island community to strengthen the leatherback turtle monitoring programme and provide on-going monitoring of other habitats.
- Community awareness & outreach programmes:
    - Drama group such as the WwooFers who have had some help from the Wan Smolbag drama group and is a good example of collaboration and sharing skills.
    - Radio programmes that run conservation spots thus raising awareness e.g. advising communities on anchoring buoys now in place (in partnership with the dive shops) to protect coral reefs around Gizo.
- Capacity building programmes:
    - *Women in Fisheries workshop*: helping women to understand what is in their marine environment, which resources are food, and how to maximise economic returns without over-exploiting resources. Women also help to raise greater conservation awareness within their own community as they are usually the main food gatherers for the family.
    - Gizo Women's Action Group (GWAG) is a result of the Women in Fisheries workshop and is now initiating a water quality monitoring programme for the waters around Gizo.
    - Seaweed, vanilla, coconut oil and butterfly farming workshops being conducted as an option for alternative livelihoods that are more environmentally sustainable.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

Working with the seaweed farming, how successful is that? **ANS:** The success of the programme depends on *a)* having a market and *b)* the market price and natural conditions, such as the predation on seaweed farms by rabbit fish. However, continual replanting of the seaweed has appeared to counter this problem.

2.1.1b Arnavon Marine Conservation Area (AMCA), Solomon Islands

This presentation was made by Catherine Siota, Marine Officer, The Nature Conservancy, Solomon Islands. *(Ref. Appendix 5)*

- **INTRODUCTION**

AMCA is located in the Manning Strait between Choiseul and Santa Isabel. We have been working with three communities – Kia, Wagina and Katupika. The three communities use the AMCA as their fishing ground for subsistence and local market

though excess is also taken to the fisheries centre at Wagina and Sire which processes on average 20 tonnes per month. The main donors for this project have been SPREP; TNC (since 1992) and KNCF. This area is possibly the largest nesting ground within the Pacific for the Hawksbill turtles and is one of the longest monitoring and awareness conservation areas in the Solomon Islands. The AMCA Management framework consists of two representatives from the three communities, a provincial representative and government representatives, Peter Ramohia (DFMR) and John Pita (DEC) and TNC. Six community conservation officers also work as rangers. The communities and project personnel have noted a positive change in attitude towards the sustainable use of resources by the communities.

The main activities for this programme are turtle monitoring and tagging. Some satellite tagging results show that there is some migration from AMCA to PNG (Milne Bay) and to Australia (Great Barrier Reef).

- **Education awareness**
  - Newspaper interviews and articles.
  - Involvement in National activities (e. g trade shows, world water day etc.).
  - Distribution of posters including specific posters designed and relevant for the community and was very useful in reviving the AMCA project.
  - Puppet shows.
  - Community consultations.

Education awareness was the main tool used to resurrect the project when the field station was burnt down in 1982.

- **Challenges**
  - The ethnic tension resulting in the departure of the project coordinator and consequent halt of the awareness programme.
  - Law enforcement.
  - Dependence on external funding.
  - Isolated location, which makes communication with other coordinating areas difficult as the signal is not very good.
  - Management issue when community members do not attend meetings.

- **Threats**
  - Increase in human population (3.5% increase).
  - The drive for a cash economy.
  - Modified fishing gear.
  - Logistical management issues such as access to remote areas with outboard motors.

- **Lessons learned so far are**
  - Culture and Religion play an important role in the Communities.
  - Building trust and confidence with communities takes time and commitment.

- Feedback to partners and communities must be user-friendly and audience appropriate.
- Do not over estimate the abilities of resources of partners.

- **Recommendations**
  - Need to network with other community based marine protected areas within the Solomon Islands and around the region to share lessons and resources.
  - Need to address the challenges listed above for the long term sustainability of this project.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

What are the backgrounds of the people in the AMCA? **ANS**: Three different communities with different cultural backgrounds (Kiribati and Melanesian). Also have different values and skills in relation to the use of marine resources.

Who holds the traditional ownership of the islands? **ANS**: Kia community claim rights on the island (Kia & Choiseul are close in proximity and also intermarry), and Wagina community use the marine resources heavily, however it is Government owned but people from Isabel & Choiseul claim. There is also another group that is there who do not claim ownership but use the resources, so it is quite complex.

2.1.1c Education and Awareness Programmes: Baniata and Havila, Solomon Is.

This presentation was made by Ms. Mary Bea, TDA Eco-Lodge Manager, Tetapare Descendents Association, Solomon Islands.

- **INTRODUCTION**

Turtle awareness activities have been carried out in Havila and Baniata, on Rendova Island. Prior to the establishment of the TDA, Fisheries officers had come out to these communities and told the Baniata people not to kill turtles as it was illegal, however as it was their custom the information was not taken seriously and this practice continued. Mary first learnt about conservation issues from expatriate friends who were working with the Tetapare project and offered their assistance to expand the awareness programmes to Baniata and Havila.

- **AWARENESS PROGRAMME**

Baniata is a very important site for turtles and if the people of Baniata properly protect the leatherback turtles, then it would bring greater benefits to them. Mary and others (Catherine and John) talked to the elders and the chiefs of Havila and Baniata about protecting leatherback turtles. At first the reaction from the villagers was not favorable, however after more dialogue, Mary and the group were accepted to talk further. Although they made three visits, turtles were still being killed. The group persisted with the programme, including educating and initiating discussions around the hard questions for example; the community admitting that there used to be a lot more turtles in the past but has now noticed a decline. People in the village now understand and know that should

they look after turtles there will be other benefits. From the rangers' reports there has been an increase in turtle numbers since the programme began.

Through the awareness programme, people who used to kill and eat the turtles are now responsible for monitoring and protecting them. The programme also involved village elders who are very powerful but have little understanding of the changes happening in the environment. The youths were also involved and were asked to talk to the elders. As part of the programme, Mary asked the religious leader of the Christian Fellowship Church (CFC) to give orders to his church members to protect and not eat leatherback turtles and these people are now responsible for monitoring and recording data. During the awareness programmes Mary told the people that "they (TDA, WWF and communities) were here to look after the resources and that God wouldn't come back to do another creation". The emphasis on this programme is community ownership and so the onus is on the community to look after the resources for the future.

- **COMMUNITY MONITORING PROGRAMME**

Community monitors are given small incentives. Everyone is a ranger in the village and if someone sees a turtle, they return to the village and inform the turtle monitor, who then returns with a camera to document the turtle or tracks if the turtle has left before the team returns. The recorder, the spotter and the village each get SBD 10.00. The village has a trust fund into which the SBD 10.00 is put into and contributes towards community projects and/or school fees.

2.1.1d Poverty Alleviation through Capacity Building in the Solomon Islands

This presentation titled *"Community Based Management and Coral Reef Restoration"* was made by Mr. Hugo Tafea, Marine Community Officer, Foundation of the South Pacific International (FSPI), Solomon Islands. *(Ref. Appendix 11)*

- **INTRODUCTION**

This is a SPREP funded project and started in 2002. The project is being conducted with communities in Marau Sound, Guadalcanal, Ngella, Central Island Province and Langa Langa lagoon (Malaita). Emphasis has been placed on community initiatives over the next three years. The reason for working with these communities is that:

- In Marau there is coral extraction for aquarium and curio trade.
- Sandfly (Ngella) there is coral extraction for aquarium and curio trade, lime production and dynamite fishing issues.
- Langa Langa there is dynamite fishing and lime production.

- **MAIN POINTS FROM THE PRESENTATION:**
  - Awareness raising and the PLA process is very important for identifying problems and solutions while strengthening existing village structures.
  - Need to assist the communities to identify and establish their marine protected areas and coral rehabilitation programmes
  - This project has been supported by MFMR and involves TNC, IWP ECANSI, SIDT, Department of Environment & Conservation, WWF, MAC.

- Some successful achievements include: awareness raising, establishment of five MPA's, with more requests coming from other communities in these areas.
- Setbacks include the ethnic tension which caused delays in the recruitment of project staff, initiation and implementation of activities and release of funds.
- Future plans include the follow-up workshops with the project communities, assessment of established community MPA's, networking with other community groups nationally and regionally, establishing legal frameworks for these MPA's and implementation of other activities related to this project.

2.1.1e Kamiali Integrated Conservation Development group (KICDG), PNG

This presentation was made by the KICDG Assistant Project Coordinator Mr. Collin Naru, Papua New Guinea.

- **TOOLS USED**
  - Workshops to create awareness and also to recruit members of the community to carry out monitoring of the beach. Small incentives (from project funds) are provided to compensate for the time spent away from family. During the night the monitors patrol the beach then go back to their families and gardens in the day. These people are trained by the KICDG group to do the monitoring. KICDG has received training from VDT, SPREP, DEC and NOAA and works very closely with VDT.
  - Amburi theatre group who are also from the same area perform songs on the conservation and life history of the leatherbacks as well as the harvest of the turtle. This way the attention of the community is captured and helps with achieving conservation goals.

Previously, eggs of the LB used to be sold at the market but perhaps with all the awareness activities that have been on going, there has been a noticeable lack of their presence.

- **QUESTIONS AND COMMENTS ON THE PRESENTATIONS**

What type of training do you provide? **ANS**: Tagging and training on how to fill out the data sheet, also training based on communities requests. As there is guesthouse training has also been provide on hospitality courses for the community.

What role does the church play now? **ANS:** Church leaders are also members of the community that can influence the community towards conservation. A community approach can help make the community feel like they are all owners.

2.1.1F EDUCATION & AWARENESS PROGRAMMES IN MILNE BAY, PNG

This presentation was made by Mr. John Gonapa, Education and Awareness Officer, Conservation International, Papua New Guinea.

- **INTRODUCTION**

John Gonapa has just started with the Conservation International programme in Milne Bay and hopes to take some of the lessons from this workshop to work at his project site.

The project is community based and focused on coastal marine conservation activities. Currently, the project is still recruiting and testing out different environmental tools to see which will work better in their programme. The tools that are used need to be user friendly for the community. The main awareness and education tools that are used in the Milne Bay project are:

- Participatory Rural Appraisal (PRA) tools are used to determine what the needs and what the possible threats are. The results are then put together as posters in a broad sense to address marine conservation.
- Village engagement trainers (VET) conduct awareness on marine resources such as bech-der-mer and turtles.
- Church mobilization, using the Pastor's fraternal, is then engaged so as to mobilize about ten large churches in the province to drive the conservation message.
- Special events like the World Environment Day where youth bands were employed.
- T-shirts have been printed with environmental messages.
- Turtle tagging programme started last year with Noel Wangunu and monitors have been trained.
- Curriculum development *"Below the surface"* learning within your own environment programme and another curriculum product should be printed out before the end of this year.
- Other awareness products are the articles in the in-flight magazine of Air Niugini.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

Why is the involvement of church leaders so important? **ANS**: There is a huge respect for church leaders within the community so the decisions that they make are near to law.

2.1.1g Manus Environment Action Response Team (MEART), Manus, PNG

This presentation was made by Mr. Selarn Kaluwin, Coordinator, Mbuke, Manus, Papua New Guinea.

- **BACKGROUND**

Mbuke Island is near a nesting area for green turtles. Between 2002 and 2003, approximately 128 turtles were counted of which 86 were female. This is a well-known area in Manus for hunting turtles, which are normally taken for traditional ceremonies. Other issues in this area are dynamite fishing. Would like to take back information and knowledge from this workshop to help with work in the community. (Refer to Figure 8 – MEART Presentation).

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

Do you also do tagging? **ANS**: Not yet, so we would like to learn from this workshop and perhaps start this season.

Figure 8: *MEART (Manus, PNG) presentation.*

2.1.1h Wan Smolbag Tools for Community Education, Vanuatu

This presentation was made by Mr. George Petro (Coordinator, VanuaTai Monitors); Annette Charley (Actress, Wan Smolbag), Port Vila, Vanuatu. *(Ref. Appendix 12)*

- **INTRODUCTION**

Wan Smolbag has five main methods and / or tools that are used to spread the message to the community about environment, turtles and other issues such as conflict resolution especially relating to land issues. With their tours around the communities, they are also faced with communities who want them to address some of their other issues, for example the megapod conservation. During these tours Wan Smolbag also addresses issues relating to community based conservation and the establishment of community based marine protected areas. So far there have been some successes including the establishment of two community based sites within Port Vila where tourists pay to visit, or the deployment of turtle boards notifying the public that there are turtle nesting and feeding grounds and to respect these areas. Of the five methods, the most popular is drama.

- **TOOLS AND METHODS USED BY WAN SMOLBAG**
  - The first method is through live performance plays and drama: Before a play is produced the team carries out research with the community to assess what the prevalent issues are for the community. Based on the results, a play will be written and performed for the community. After the performance, discussions with the community are encouraged in order to gauge their understanding of the play and relevance to particular issue. For example if the play is on turtles some questions that may be asked are "*what the laws, traditional / government are; what the fines are*?" Target audiences include the Chief and/or representative, youth leaders, women representatives and the church leaders.
  - The second method is using radio spots or radio drama. Radio is used, as some of the islands in Vanuatu are very remote. These programmes have also been aired on Air Australia (Tok Pisin).
  - The third method is through posters and turtle boards as they are easy and eye catching.
  - The forth method is through video plays and documentaries.
  - The fifth method is through participatory workshops which are focused on addressing issues that are relevant to a particular community.

There are some weaknesses with these methods however, which include:

- Plays may sometimes be seen as entertainment and the message does not get across. For example in Maskelynes where the play has been taken out every year since 1995, although the community may be tired of it, attitudes have taken a long time to change, but now they have agreed that they will only harvest 24 turtles per year.
- Radio: Some times there are problems with the transmission. FM stations are okay but for the AM, some outer islands have time limitations.
- Posters / turtle boards: some ignorant people will come and pull them out; graffiti; or cyclones will knock them over.

- Video: people use them as entertainment and also use it as a fundraiser and the message in the video gets lost.
- Workshops: these rely on the commitment from the communities.

- **KEY AREAS THAT MADE THIS PROGRAMME A SUCCESS WERE:**
  - They were entertaining and educational and promoted new attitudes towards marine resources.
  - There was extensive background and research conducted around key issues.
  - Good two-way flow and very interactive resulting in trust being built up between the communities and Wan Smolbag.
  - Timing was right as people were visual noticing the decline in their resources.
  - Turtles were important from a subsistence and cultural aspect and needed to be conserved to ensure that these requirements could be met in the future.
  - Support for traditional management structures and integrated into legal framework with support for training that allows both women and youth to participate.
  - Tagging programmes provide ownership of resources for the communities.
  - Supports alternative ventures such as eco-cultural tourism.

(Note this section has been taken from Francis Hickey presentation on community based resource management in Session 1)

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

Do you get charged for the radio spots? **ANS**: Yes, although sometimes through negotiations the price can come down a bit but at other times, the full fee is paid.

What incentives do you give the turtle monitors to have them (question from PNG and SI participants)? **ANS**: At the beginning of the programme, they were given caps. Then when the forms were sent out and it went on for a few years until the programme stopped. During the annual workshops, they are told that these are their resources and if they care about their children's future then they should look after their resources. Then they are also given a small bit of allowance for the duration of that workshop. The positive attitudes shown by the monitors is greatly appreciated and acknowledged.

With the turtles there has been one play, with the megapod there are three, why is that?
ANS: A volcanic island is the home to a megapod and is endemic to Vanuatu which is why conserving them is important. Thus following the same method as done with the turtles, meetings and workshops have been conducted with the chiefs and communities and they have finally decided that there should be an island wide ban for a certain period of the year. The eggs are sold for money for school fees. So they took the play of the megapod and for a while after that coupled with the ban, the hunt for eggs significantly declined. The three different plays were to first educate about the life cycle, the second was on means of protection, and the third was about the ban.

Comment: Small networks with the community and the government – allowed for them to get the correct information which could then be taken out the communities

2.2: Successful Tools, Resources, Capacity Needs and Lesson Sharing

The second half of this session was done in break out country groups (Solomon Islands, Papua New Guinea, and Vanuatu) and a regional group. The participants from Papua, Indonesia had not arrived yet, however, some of the methods and tools that are used in their programmes are covered in their country and community presentations (Session 1).

This session required the four groups to discuss and present back around three questions:

- ***Which education tools and methods have been successful & why?***
- ***What resources / capacity are required to improve community education?***
- ***How can we share our knowledge and experiences in community education?***

2.2.1 Solomon Islands

Which education tools and methods have been successful & why	**What resources / capacity are required to improve community education**	**How can we share our knowledge and experiences in community education**
Awareness talks	Funding: consultations / awareness; incentives; networking etc	Newsletters (national / regional)
Video, Radio	Training for data collection & interpretation	School curriculum / church
Posters / newspapers	Building decision making skills in communities based on data	Look & learn programme
Drama / play	Target community leaders / schools	Radio
Direct involvement in turtle tagging	Regular communication & feedback	Informal discussions
Church,	Standard data collection	Contact list (community / expert)
Community meetings Workshops	Explore government incentives (tax exemption)	Advisory panel
Merchandize (eg: T-shirts; lavalava; caps)	Educate politicians / build community political empowerment	Workshop for potential members

Table 2: *Solomon Islands Evaluation of Education and Awareness Programmes*

Note: Successful because it achieves aim of awareness talks, need to understand skills and use of information material (video posters)

2.2.2 Papua New Guinea

Which education tools and methods have been successful & why	What resources / capacity are required to improve community education	How can we share our knowledge and experiences in community education
Awareness – helpim long unstand	Funds, Theatre group, Video shows, Radio talkback (live) / media (TV), Posters/ pamphlets / brochures	Exchange and programmes at community level (working across different communities to encourage the protection of migratory paths of turtles – nesting beach which is also adjacent to the shipping lanes.)
Capacity building – wokim peles man	Training, Exchange programme (network) and Workshops,	Cross project visit eg) Morobe province; Milne Bay
Special events – fil responsible (take on the conservation role once they are made to feel responsible): World Environment Day / WWF / Coastal clean up	Funding – for long term monitoring, Commitment	Cross country programmes (PNG/Papua/Solomons/ Australia/ Western Pacific)

Table 3: *Papua New Guinea Evaluation of Education and Awareness Programmes*

2.2.3 Vanuatu

Which education tools and methods have been successful & why	What resources / capacity are required to improve community education	How can we share our knowledge and experiences in community education
Posters, visual aids, videos	Funds	Report back results of turtle research to stakeholders / communities
1995 Year of the Sea Turtle (need to perhaps work on the momentum built up after having another YOST)	Technical capacity	
*[1] Brochures / pamphlets / information sheets	Tag return' awareness	Communities presenting at international / national conferences / meeting
Face to face communication (sharing with families; local schools), workshops	Simplify and translated research and more visual	Encourage community involvement in volunteer research work
Tagging and maps of nesting site / migration routes	Annual regional / sub regional workshops continued	Lobbying for review of current legislation and encourage its effectiveness
Caps / t-shirts (effective but maybe expensive)	Fishermen / observer education	Community exchange and tie turtle conservation into local culture
*[2] Billboards for fundraising		

Table 3*: Vanuatu Evaluation of Education and Awareness Programmes.*

2.2.4 Regional Group

Which education tools and methods have been successful & why	What resources / capacity are required to improve community education	How can we share our knowledge and experiences in community education
Plays and drama	Financial support (production & distribution of awareness materials)	Training in drama techniques with other organisation (optional)
Radio spots or radio drama	Expansion of monitors network	Through international, regional and national forum
Posters and turtle boards	Training for monitors	Sharing of information on the web
Video, plays and documentaries	National & provincial support strengthened	Sharing in national information centre (national database for information)
Participatory workshops	Improved communication & understanding with communities	Video production & distribution (documentaries)
	Build community capacity to revive, strengthen & use traditional management practices. (Losing the customary practices	Exchange visits (international / regional/ national)
		Sharing of traditional knowledge (documenting traditional knowledge – Francis Hickey work – one of the main issues is the loss of recognition of the value of the resources)

Table 4: *Regional Evaluation of Education and Awareness Programmes*

Notes from the Regional Group

- Personal experience from Florida: on a developed beach, there is a general lack of awareness. It is important to take the time with people to create awareness on issues such as problem with artificial lighting which attracts baby turtles.
- Effective in Florida as there's a choice for licence plates so any choice with turtles with them goes towards a particular fund.

SESSION 3.0
TURTLE CONSERVATION AND RESEARCH IN MELANESIA

Fig 9: *Dr. Scott Benson (NOAA) describes PIT (Passive Integrated Transponder) tagging techniques to workshop participants.*

3.1: Marine Turtles Conservation and Monitoring

This presentation was made by Dr. Kenneth T. MacKay, Field Program Coordinator, Canadian South Pacific Overseas Development Programme (C-SPOD), Canada.

- **INTRODUCTION**

The objective of this session was to gather information on what species are found in these waters, their nesting beaches and feeding grounds. The session was led by Dr. MacKay, and was divided into three components. The first component gave participants a better understanding of the status of marine turtles in Solomon Islands, Papua New Guinea, Papua, Indonesia and Vanuatu (as are documented in the first section of this report), Fiji, Florida and Australia; the second component consisted of breakout groups to further update information collected during the Western Pacific Sea Turtle workshop in Hawaii, 2004, followed by plenary and the third component was a series of presentations on monitoring, research and data analysis by Dr. Scott Benson (NOAA) and Anne – Patricia Trevor (Assistant Turtle Database officer - SPREP).

- **CONSERVATION**

Over the past years, much has been done to protect marine turtles, for example in the Pacific the ban in shell trade, which had been mainly targeting hawksbill turtles. Leatherback turtles are globally endangered and nesting beach such as those in Malaysia, which used to be the largest nesting beach in the Western Pacific with up to3000 nesting in 1960, declined in 1970 to 2000. Currently, perhaps one or two nest and there is a real danger that these turtles are about to disappear.

The main reason behind this decline is attributed to the fact that annually, people would collect all the eggs for sale until the extraction rate exceeded the population's ability to produce. There are other important leatherback turtle nesting beaches such as those in Mexico, but numbers are there too are also declining. In the entire Pacific, there are perhaps only 2000 -3000 nesting females (twice that for total numbers), with the main nesting beaches for the Western Pacific being in Papua, Papua New Guinea, Solomon Islands and Vanuatu, hence their importance. Some of the conservation efforts so far have resulted in success, for example in Hawaii, the long-line industry for swordfish was closed due to a small number of leatherbacks being caught as by-catch. However it is very important that on our beaches where there are leatherbacks we need to conserve them by not eating adults or harvesting their eggs.

The Olive Ridley is another turtle species whose records indicate their dangerously low numbers. Some nest in Indonesia and we are also interested in getting more information on this turtle in terms of numbers and migratory information.

- **MONITORING**

The monitoring programme by SPREP has begun to get good numbers of leatherbacks. Records from Kamiali indicate that they had 29 leatherback nest during the last season, in Papua there are between 400 -700 that nest each year, and in Isabel (SI) perhaps 200 or more. Tetapare is also beginning to show good numbers of 200 nesting and although the hatchling success rate is currently low with only 40 to 50 turtles, due to the status of these species each hatchling is important to conserve. An important message to take back to the communities is that although turtles come and nest on your beaches and feed on your seagrass beds or coral reefs, they do not belong to a particular country and it is up to all of us to work collectively to protect these visitors when they are in our waters. For example: tagging has shown that green turtles nest on the eastern Pacific and feed in Fiji waters where they could be caught and eaten.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

How do we get information? **ANS**: In order to determine the status of turtles it is not to scientists we should turn but to the people living on or near the nesting beaches. With training, they can supply the data that scientists need to determine if populations are increasing or decreasing.

Comments from TDA participants
It is not easy to get to the nesting beaches (black sand) on Rendova as it is on the weather coast, which is very rough and very exposed. Here creepers are destroying the nesting beaches. The local community of Havila, Baniata, Tetepare have been collecting information on the numbers of leatherback crawls which is very useful information. Tetapare has two years of data and is going on the third year and this consistent data collection can be used for monitoring. For most communities there is the opportunity to go further in turtle conservation by means of commitment and training.

3.1.1 Species of Special Concern: Turtles in Fiji

This presentation was made by Ms. Penina Solomona, Regional Marine Officer, WWF South Pacific, Suva, Fiji. *(Ref. Appendix 13)*

- **MAIN POINTS OF THE PRESENTATION WERE:**
  - There are four species of marine turtles known to occur in Fiji waters (hawksbill, leatherbacks, loggerheads and green).
  - The main threats to these species are: direct take, bycatch and/ or incidental take and habitat loss.
  - Government and community activities towards the conservation and protection of marine turtles include:
    - Moratorium on the harvesting of marine turtles declared in 2003 to 2008. This follows on from a previous five year moratorium implemented in 1995, to mark the Year of the Sea Turtle.
    - Education and awareness programmes with communities by NGO's as part of the community based marine protected areas programmes.
    - Tagging programmes with the Fisheries Department using SPREP tags.
    - Traditional fishing gear making a comeback.
    - Collaboration with fishing industry to discuss the by-catch issues.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

Why has traditional fishing gear made a comeback? **ANS**: The reversion of ownership of resources back to traditional owners by the Fiji Government has now put the onus of protecting these resources on the communities. It has also been a way to develop a sense of ownership and accountability.

3.1.2 Experiences from Turtle Monitoring in Florida

This presenationa was made by Ms. Karen Frutchey, Scientist, National Marine Fisheries Services, United States of America. *(Ref. Appendix 14)*

- **MAIN POINTS OF THE PRESENTATION WERE:**
  - All turtles (loggers, greens, leatherbacks) that have been recorded on their nesting beach show population trends that indicate an increase. This could be because the beaches in Florida provide a refuge.
  - Some satellite tracking work show that some go as far as Cape Verde and Canada

- Contractors available to work with fishermen on turtle exclusion devices (TEDs) in Florida.
- Programme with the National Fisheries Authority in PNG to look at ways to reduce by-catch in PNG, training of observers to also record data on by-catch.

3.1.3 Marine Turtles in Queensland, Australia

This presentation was made by Dr. Donna Kwan, CRC Torres Strait and co-written with Ian Bell, Queensland Parks and Wildlife ServiceQueensland, Australia. *(Ref. Appendix 15)*

- **BACKGROUND**

Six of the world's seven species of sea turtles are found in Queensland (Flat backs, Olive Ridley, leatherbacks, hawksbill, loggerheads and green turtles). In brief:

- Flatback turtles are endemic to Australia. There are four genetic stocks in Australia and very little known about the status of the stock. Cape York population are probably in decline due to heavy predation of eggs by indigenous people and feral pigs.
- Olive Ridley turtles: Very little is known in Australia about this species. Genetically the ones in Australia are distinct from other countries.
- Leatherback turtles: Poorly known, with very small populations and is declining.
- Hawksbills turtles: large nesting populations in Australian rookeries, and migrate nationally and regionally. Most of the impacts to these species are from external threats for example the bekko trade. Two genetic populations are recognised, North East and Western Australian populations.
- Loggerhead turtles are the most critically endangered of Australian species populations. Feeding grounds for these species may be up to 2600 km away (in Vanuatu). Current monitoring of two important loggerhead-monitoring beaches indicates that they may be in serious trouble. Population predictions suggest that this population may cease nesting in Australia by 2020. Some of the impacts from surveys indicate that there are nesting beach impacts and feeding ground impacts.
- Green turtles: there are seven distinct genetic populations, with the Eastern Australian stock being in the early stages of decline. There are also indications that the size of nesting animals are getting smaller with longer remigration intervals (coming back to nest) is getting longer with implications on the learning associations (e. g migratory routes) between older experienced turtles returning to the same nesting beaches and first time nesters

- **THREATS**

It is important to note that the mortality of turtles can also be related to natural causes for example, in adults, stranding and senescence. Other serious threats in Queensland come from human impacts such as:

  - Direct mortality from boat strikes; traditional hunting (Torres Strait); trawl by-catch (all trawlers in prawn fisheries need to have TED's).
  - Habitat loss.
  - Lyngbea (algal blooms that smother the seagrass; turtle & dugongs also feed on this which may have a toxic effect).

- Fibropapilloma: possibly a Herpes virus and linked to poor water quality. Could also be linked to the Lyngbea.
- Anthropogenic noise and boast strikes.
- Entanglement in marine pollution (debris). The Government has so far put aside 3.8million dollars to address this issue in the Cape York Peninsula; trawl net; ghost nets; ingestion of marine pollution (e. g fish hook; plastic bags).
- Over harvesting in the Torres Strait, targeting female turtles (and eggs) as they are considered to be very nice eating due to the fat. Very rarely catch a male turtle.
- Urban development: being squeezed out of their natural habitats.

In PNG, along the southern coasts places like Daru, there are still active turtle markets and people are becoming dependent on this resource (possibly PGK 10 for a string of meat).

- **CONSERVATION AND MANAGEMENT INITIATIVES**

In Australia, there have been two main initiatives. These are the National Turtle Recovery Plan and the Northern Australian Dugong and Turtle Project.

- *National Turtle Recovery Plan:* The objective of this plan is to assess the causes of turtle mortality and identify information gaps for this recovery plan. Key features of this plan are engaging Aboriginal and Torres Strait Islander people. One of the specifics of the plan is to maintain turtle populations at levels that can support the sustainable use (as opposed to 'no' use). Queensland initiatives include *a)* Significant rookeries being protected, *b)* Significant seagrass beds being monitored and protected an *c)* "go-slow" areas.

- *Northern Australia Dugong and Turtle project:* This is worth AUD 3.9million over three years. The objective of this project is to build the capacity of indigenous communities in five regions, as issues are different in each region. For example AUD 570,000has been set aside for the Torres Straits to address the main issues of over-harvesting. The project will focus on building the capacity of communities for community-based management of their resources.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

Where have you found those turtles with tags? **ANS**: Animals that have been tagged on Australian beaches and also those tagged in the Solomons have been recovered in both countries, which indicate that they are probably migrating both ways.

In the US, in order to conserve turtle in US waters; one has to fund activities in other countries? Has Australia done the same? **ANS**: No, not yet, so far money has only been provided by the Government to work in Australia. This was in response to a report that was recently circulated and the Government reacted by giving 3.9m for turtle conservation and management.

3.2: Country Status Information Update

The objective of this session was to update the information presented in 2004 at the Western Pacific Sea Turtle workshop in Hawaii. The participants broke up into four country groups to discuss the status of their marine turtles around the following questions:

- ***Status of green turtles, leatherbacks and hawksbills their threats, nesting beaches; feeding areas and other sources of information;***
- ***How do we get more and better information on the status;***
- ***What is needed to get more information.***

Tables 3.2.1 through to 3.2.4 were generated during the Western Pacific Sea Turtle Workshop, 2004 and were used as the bases of current knowledge on leatherback turtles that the groups were tasked to update.

Solomon Islands

Beach (>20 DC nests)	Size (km)	Nesting season by month (P=Peak)												Number Nests	Number Tagged	Threats	Monitoring	Quality of data	Notes
		J	F	M	A	M	J	J	A	S	O	N	D						
Western Province																			
Baniata (Rendova Is.)	2-3	P											P	65*	None	Wave erosion	Yes, villagers	Fair	Longest nesting beach in Solomons
Havila, (Rendova Is.)	2-3												P	38*	None	Wave erosion	Yes, villagers	Fair	
Quero beach (Tetapare Is.)	2													20	None	Monitor lizards, wave erosion	Rangers	Poor	3 other nesting beaches 10-20 nests
Isabel Island																			
Sasokolo	~1												P	150+ (167?)	7 (1993), 25 (1995), 27 (2001)	Monitor lizards and crocodiles	Yes	Fair	Need assistance for continuation. Incomplete season surveyed for all 3 yrs
Litogahira	1.5												P	150 (200+?)		Monitor lizards, crocs, egg collection, logging	Yes, minimal	Incomplete	Urgent need to monitor, incomplete season surveyed
Lilika	?												P	150		Monitor lizards, crocs, egg collection, logging	No	Incomplete	Urgent need to monitor
Salona	?												P	150		Monitor lizards, crocodiles, egg collection, logging	No	Incomplete	Urgent need to monitor
Katova bay (East Coaast)														20-30		Monitor lizards, crocodiles, egg collection, logging	No	Incomplete	Based on 1980, 1989
Rakata Bay														20+		Monitor lizards, crocodiles, egg collection, logging	No	Incomplete	Based on 1980, 1989
Choiseul Island																			
Vachu River	2													50		Monitor lizards, croc, egg collection	No	Incomplete	Based on 1980, 1989

Table 3.2.1 *Solomon Islands (Data source Western Pacific Sea Turtle Workshop, 2004, Hawaii Summary Report*

Papua New Guinea

Beach (>20 DC nests)	Size (km)	Nesting season by month (P=Peak)												Number Nests	Number Tagged	Threats	Monitoring	Quality of data	Notes
		J	F	M	A	M	J	J	A	S	O	N	D						
Kamiali	11	P	P									P	P	107* (min)	40-72	Predation (lizards, pigs, crocs), egg collection, erosion, gardening (remove trees), debris from the river	Yes	Incomplete. (nests), Good (tagging)	Wildlife Management Area 4.2km currently monitored. Aerial surveys (one day) with ground truth
Buang-Buassi	5.5	P										P	P	104 (min)	1	Predation (lizards, pigs), egg collection, artificial lighting, coastal development, debris from the river	No	Incomplete	Aerial surveys (one day), no ground truthing. Beach is large and good for nesting, protection has begun
Fulleborn	7.5											P	P	26 (min)		Logging, Egg collection, erosion, Nest predation (feral dogs, crabs)	No	Incomplete	Data collected on aerial survey (one day), 2004
Korapun	3.25	P												14 (min)		Feral pigs, iguana	No	Incomplete	Data collected on aerial survey (one day), 2004
Salus	4.57											P	P	10 (min)		Feral pigs, iguana	No	Incomplete	Data collected on aerial survey (one day), 2004
Bouganville	5	P										P	P	10		Feral pigs, iguana, sedimentation	No	Incomplete	T Leary, 1990 (Laluai Pt.)

Table 3.2.2: *Papua New Guinea (Data source Western Pacific Sea Turtle Workshop, 2004, Hawaii Summary Report*

Notes: *Number of crawls

Papua, Indonesia

Beach (>20 DC nests)	Size (km)	Nesting season by month (P=Peak)												Number Nests	Number Tagged	Threats	Monitoring	Quality of data	Notes
		J	F	M	A	M	J	J	A	S	O	N	D						
Jamursba Medi (consists of Wwmbrak, Batu Rumah, Lapon and Warmamedi)	18						P	P						1,865-3,601, 1,999-2,426	70	Feral/domestic pig, domestic dog, logging, tidal inundation	Yes	Exc. (nests), Poor (tagging)	WWF data, 2002, 2003. Complete season, Everlasting Nature of Asia 2002-2003
War-Mon	6	P	P											1,508		Feral pigs, logging, tidal inundation, egg collection	Yes	Exc	WWF data, 2003, complete season
Mubrani-Kaironi	20													Unk[1]		Egg collection, feral pigs	No	Incomplete	Adipati and Patay, 1984, Season unclear
Sidey-Wibain	18													Unk[1]		Egg collection, feral pigs	No	Incomplete	Adipati and Patay, 1984, Season unclear
Yapen Islands	5													Unk[1]		Egg collection, tidal inundation	No	Incomplete	Maturbongs, 1999, Season unclear

Table 3.2.3: *Papua, Indonesia (Data source Western Pacific Sea Turtle Workshop, 2004, Hawaii Summary Report)*

Notes: [1]Locals report approximately 20-25 nesting leatherbacks on Mubrani-Kaironi and Sidey Wibain

Vanuatu

Beach (>20 DC nests)	Size (km)	Nesting season by month (P=Peak)												Number Nests	Number Tagged	Threats	Monitoring	Quality of data	Notes
		J	F	M	A	M	J	J	A	S	O	N	D						
Votlo (St Epi)	4	P											P	31	9	Feral animals, flooding river, storm surge	Yes	Fair	Trail survey by VTRM (Nov, 2002, February 2003)
Malakula	?															Egg collection, meat harvest			Should be monitored. 5-6 potential nesting beaches

Table 3.2.4: *Vanuatu (Data Source: Western Pacific Sea Turtle Workshop, 2004, Hawaii Summary Report)*

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

Are products made from hawksbill turtles exported from Solomon Islands? **ANS:** Commercial use has not been allowed since 1993, although Solomon Islands are not a signatory to CITES.

3.3: Monitoring, Research and Data Analysis

3.3.1 LEATHERBACK MOVEMENTS: PNG & PAPUA, INDONESIA

This presentation was made by Dr. Scott Benson, Scientific Officer, National Fisheries and Marine Services, United States of America. *(Ref. Appendix 16)*

- **INTRODUCTION**

This presentation was based on data collected using satellite transmitters and genetic sampling of leatherback populations at nesting beaches in Papua, Indonesia and Kamiali, Papua New Guinea. Pacific Actions listed in the Pacific Sea Turtle Recovery Plan include identify stock ranges, census and protect nesting populations, eliminating incidental take in fisheries and determining the movement patterns and foraging habitats.

MAIN POINTS FROM THE PRESENTATION WERE:

- There are two stocks of leatherbacks in the Pacific Ocean indicated through satellite tracking as well as genetic studies, and for Melanesia, this is the Western Pacific population.
- US Fisheries also catch these animals and indicate that they are Western Pacific (long line & gill net).
- Huon coast has high fidelity and decreases as one moves North and South of this area.
- Evidence of re-nesting at other islands (Bouganville and Woodlark), outside of Lababia and north (which was previously unknown).
- Turtles have been tracked as far as New Zealand and in areas close to Vanuatu, New Caledonia and Solomon Islands.
- There has been an issue of satellite data in the area of deep water around the New Caledonia trench.
- Telemetry studies: Jamursba Medi, Papua, Indonesia – July 2003 indicate that turtles inter-nest in the Raja Ampat Islands and post nesting migratory as far as Philippines and California.
- There is some evidence that these turtles follow the Pacific currents.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

Any theories on how they navigate? **ANS**: Very sensitive to light as the thinnest spot on the whole skull (possibly linked to the pineal gland) is able to track light and temperature influences.

One of the slides showed an area near Vanuatu, how long does it take for them to travel that far? **ANS**: About 3 to 4 months. The transmitter should still be okay at that point but not sure what happens in deeper waters around the New Caledonia trench.

Who is funding all this work? **ANS**: NOAA Fisheries through the Federal Government. Leatherbacks are an endangered species being caught in US Fisheries so there is a need to address this issue. Components of this programme include attempting to understand what the movements for these turtles are so that mitigating measures can be put into Fisheries programmes to avoid impacting on migratory populations.

How deep can the satellite go? **ANS**: It has a saltwater switch that operates when it is out of water and which sends out transmission, but once it goes underwater, it shuts down.

In Vanuatu we are not familiar with satellite tags, how long do they stay on the turtles and what causes them to go off? **ANS:** There is a magnesium pin which corrodes in seawater. When it corrodes it will release the harness. Some show that they stay on for about 2 years although they should come off sooner. Transmitters should perform for 2 years, as that is how much battery power it has and allows for monitoring over longer periods.

Interesting that in the study that they appeared to nest on more than one island, and dispels the idea that they come to one natal beach, please explain how this is related to false crawls? **ANS**: Telemetry data doesn't give out much data on how often a turtle does false crawls. False crawls are better found out by the beach patrols.

3.3.2 Turtle Research and Monitoring Database System (TREDS)

This presentation was made by Ms. Anne Patricia Trevor, Assistant Turtle Database Officer, Secretariat of the Pacific Regional Environment Programme. *(Ref. Appendix 17)*

- **INTRODUCTION**

The Regional Marine Turtle Conservation Programme started in 1990 and one the main objectives was to set up a regional marine turtle database for Pacific Island countries carrying out turtle conservation activities. In 1993 a regional database was established in Australia and then it was transferred to SPREP in 1994. Since then a new Turtle Research and Monitoring Database System (TREDS) initially developed in 2003 by the SPC Oceanic Fisheries Programme (based on the Turtle Research Database System developed by Dr. Colin Limpus) has been used by SPREP. The objectives of this new database system are to:

- Monitor marine turtle migrations in the Pacific
- Monitor nesting sites
- Monitor turtle populations

- **MAIN POINTS FROM THE PRESENTATION WERE:**
  - The Turtle Research and Monitoring Database System (TREDS) runs on Microsoft® ACCESS and can be used to enter data for tagging, nesting and beach surveys.
  - SPREP member countries, Government agencies, NGOs, local communities, turtle researchers and universities will be able to access this data, through a

request to SPREP and/or via the SPREP focal points in each country. Data belongs to the countries and SPREP is only the custodian.

- Reports produced through TREDS include summaries of hatchery data, growth rates, tag inventories, encounters and recoveries, beach surveys, audits of tags and encounters (tag usage) and size frequencies by species and fieldtrips

The immediate next steps for this programme are updating and maintaining the regional database, search and rescue mission for existing data (in countries and other sources), introducing TREDS database to countries for use, networking with other turtle conservation database system and providing tagging equipment and capacity training for country programmes.

A special request was made to SPREP members and participating agencies to report all tagging and monitoring surveys to SPREP and also to locate all historical data in-country. There is also the need to update and maintain in-country database (need to have designated person) and to send updates to SPREP. The presentation concluded with an acknowledgement of support from Government agencies, NGO's and communities carrying out turtle conservation, WPRFMC, CSPOD, OFP – SPC, Dr. Colin Limpus and WWF-SPP.

- **<u>QUESTIONS AND COMMENTS ON THE PRESENTATION</u>**

Tagging form that was presented is that the standard form? **ANS**: Yes it is

As a community based NGO, would the Environment and Fisheries departments, as SPREP focal points, be happy if they sent the data straight to SPREP? **ANS:** Yes, SPREP would support the SI to send it straight to SPREP, as they receive assistance from SPREP

- If they're SPREP tags, the data has to go to SPREP as they have the mandate to this on behalf of the SPREP country members
- Even if they were to send it straight through to SPREP, SPREP would update government

Does the ownership of the data belong to the community or to the government? **ANS:** Government.

- **<u>Comments on data collection and capacity building</u>**
  - Have to recognise that tagging is a lot of hard work. Need to enable communities to properly collect and analyse data as this is an issue identified by TDA, and becomes the responsibility of government, NGO agencies and SPREP.
  - It should be worthwhile that by virtue of editing your data, you could plot your own data and get an idea of what's happening on your own beach.
  - Could make a copy of your own data while sending the originals onto the country focal points, for example in Vanuatu there is country database that all community data goes to where it is collated and sent to SPREP.

- **Comments on SPREP coordination**
  - There is a need for SPREP to get back to both academic researchers and communities to feedback on the information gathered. Perhaps most officers at the government level have access but maybe not the communities.
  - In the past have tried to get tags from SPREP, have ended up getting their own data from Australia. Would like to get the assurance that SPREP will respond to them if they ask for new tags.
  - *Response to comment from the floor:* what is important now is that the data that is not with SPREP should get to SPREP to be included on the regional database

3.3.3 Nesting Beach Surveys

This presentation was made by Dr. Scott Benson, Scientific Officer, National Fisheries and Marine Services, United States of America.

- **INTRODUCTION**

This presentation was a brief on the aerial surveys along the North coast of PNG, which were conducted by Scott Benson and representatives from PNG DEC and Huon community from the 13-20 January 2004. The approximate distance covered was 1800 miles.

- **MAIN POINTS FROM THE PRESENTATION WERE**
  - Aerial surveys were ground-truthed along the Huon coast with fairly good correlations.
  - Standardizing period of survey and to sample at the same time and place throughout the monitoring period.
  - Beach patrols were conducted during the day for nests and a large portion of this area was surveyed for the tagging at night.
  - Techniques in beach monitoring, data collection and general analysis were conducted by Scott and the survey team at Huon.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

On a low-density beach where they may be only one or two turtles that come up to nest, do they tend to come up in a particular area or is it a random one? **ANS:** They tend to have a 'sweet spot' to which they come to although they may come up all over the beach and tend to be variable.

Are there any clear correlation between nesting time and lunar phase? **ANS:** Varies from place, tends to relate also to tidal movements for example when the tides are high it helps to get them up to the beach especially if it is a wide beach.

Comment from the floor: In the Solomon Islands there is a belief that leatherback turtles during the nesting season displays a false crawl the first time the turtle goes down to the beach and after 10 days it will return, more or less at the same spot. Perhaps on this field trip it could be verified.

3.3.4 Relocation of Eggs from Nests Threatened by Tidal Inundation

This presentation was made by Dr. Donna Kwan (CRC Torres Strait); Mr. Vagi Rei (DEC, Papua New Guinea).

- **INTRODUCTION**

This was a special session held on the last day at the request of the participants, particularly those from Solomon Islands on methods of removing turtle eggs from nests threaten by tidal inundation because they were laid below the high water mark or due to high tidal waves that many of these high-energy areas are exposed to.

- **THE MAIN POINTS COVERED IN THIS SESSION WERE:**
  - Experiences from PNG and Australia on egg relocation.
  - Issues relating to low hatchling success rates.
  - Not highly recommended as it is a complicated process that needs to be conducted within a specific timeframe after the eggs have been laid and needs careful monitoring of the temperature of the hole (depth) to where the eggs are being relocated.
  - Other issues such as clearing beach creepers (*Ipomea sp*., *Cavularia sp*) and others like the devils vine and other debris around nests to assist hatchlings when they are digging out of the nests and on the way to the beach.

SESSION 4.0:
NETWORKING AND RECOMMENDATIONS

Figure 10: *Participants from Vanuatu.*

4.1: Melanesian Turtle Forum Action Plan

The objectives of this session were to:

- Assess the recommendations that had been presented over the week and identify any gaps or priorities that need to be addressed over the next three years
- Develop an action plan around the recommendations
- Identify a committed steering group to support SPREP in driving the action plan

There were two main components to this session. The first component consisted of participants discussing the recommendations organized around the following categories:

- Research and Monitoring;
- Coordination and Collaboration;
- Awareness and Education;
- Capacity Building and Training

These categories had been identified throughout the week during presentations or break out sessions to identify potential gaps and priorities for the region. Participants then presented in plenary the recommendations that they would like to take forward over the next three years.

The second component of this session had participants outline an **"Action Plan"** for these recommendations, which were ranked (high, medium, low or not applicable) according to a prioritization criteria listed as:

- Will it deliver your program / country goals and objectives;
- Is it achievable within a 3 year timeframe (2005 – 2007);
- Is it within existing capacity or is new capacity within feasible reach?

Breakout groups were developed around the four main recommendation categories and participants were divided based on expertise rather then country groups, as this would provide an opportunity for an integrated national and regional assessment of these recommendations and development of the Action Plan. Groups then presented in plenary the results of their discussions which formulated the framework of the Action Plan. The SPREP Regional Marine Turtle Conservation Strategy guided the framework for the Melanesian Marine Turtles Conservation Forum Action Plan and the recommendations from this forum will further strengthen this strategy at a national and regional (Melanesia) level.

4.1.1 RESEARCH AND MONITORING

Name	Country	Name	Country
Donna Kwan	Australia	Mamu Bero	Solomon Islands
Karen Frutchey	USA	David Argument	Solomon Islands
Noel Wangunu	Papua New Guinea	John Read	Solomon Islands
Manse Tusi	Papua New Guinea	Catherine Siota	Solomon Islands
Moses Jerry	Papua New Guinea	Francis Hickey	Vanuatu
Mason Tauku	Solomon Islands	Mike Shem	Vanuatu
Nicholson Guhumu	Solomon Islands	Tetha Hitipeuw	Papua, Indonesia

Table 9: *Team members for the Research & Monitoring group.*

- ***Recommendations from previous presentations and plenary that the research and monitoring group were asked to assess:***
  - The establishment of a national monitoring network (Vanuatu);
  - New monitoring sites (Vanuatu and Solomon Islands);
  - Update status of marine turtle populations, with specific attention on leatherback turtles (Vanuatu);
  - Surveys on traditional knowledge linked to using traditional systems, informed by biological information -cooperative management (Vanuatu);
  - Standardized data collections (Papua New Guinea, Solomon Islands and Vanuatu);
  - Collection of data on loggerhead and Oliver Ridleys (Vanuatu);
  - Technical and scientific support (Solomon Islands);
  - Assess status of off shore threats (Regional; Papua New Guniea; Solomon Islands and Vanuatu);
  - Assess eco-tourism potential (Papua New Guinea, Solomon Islands and Vanuatu).

The need to standardize data forms now before nesting season starts was the most immediate priority identified by this group.

Priority	Recommendations	Notes
High	Standardized methodology (forms; field work; data recording; in country and centralized) need technical and scientific support	Nesting and Foraging data collections
	National monitoring networks	To be feed into regional networks
	Assess, mitigate & manage impacts from beach erosion (include understanding process – food, knowledge, science)	Feedback of research results to communities in effective & appropriate language
	Factors affecting nesting, hatchling and emergence success	Including the ways to mitigate predation
	Expanded satellite training of leatherbacks	
	Tag returns to SPREP and country focal points	Information needed on what incentives could be offered and how to get information
	Monitoring harvest rates	
Medium	Assess population genetics of turtle species (Papua; CI – Milne Bay)	
	Compile & update information on historical & current sites (traditional knowledge; literature) on critical nesting sites & foraging	
	Assess eco-tourism potential	
	Investigate effective & appropriate predator exclusion methods	

Table 10: *Research & Monitoring prioritized recommendations.*

Table 10 lists the recommendations that the research and monitoring group would like the Melanesian Turtle Forum to take forward. These recommendations are a revised version of the collated recommendations that were put forward earlier by the participants.

- **QUESTIONS ON THE PRESENTATION**

In regards to consistency for reporting is there a data sheet for beach survey? **ANS**: No. There is an urgent need to have one done now.

Comments from the Floor:

- Just on the compilation and update of information on past and current nesting and turtles, recently done in Vanuatu, was slightly easy as there are not many. Francis found this in his interviews about traditional names and has a model / template that is available.
- SPREP database has a literature survey, which could be a start.
- Producing more information on the global nature of the turtle. Creating a sense of ownership of the resource creates a sense of responsibility but it may also be a double-edged sword. In maintaining the management side, there is the need to be wary of that when saying it is a global resource. We cannot hold back knowledge but at the same time there is a need to be cautious with regards to intellectually property rights.

Recommendations	Rank	Resources on Hand	Resources Needed	Opportunities (who; where)	Lead person or org	Time frame
Standardised methodology (forms; field work; data collection) on nesting / foraging; tagging. Need to assess hatching success and factors affecting them	1	QPWS, WWF Indonesia Scott Benson (Satellite tags LB), SREP Community input	Forms and standardised methodology	To do now, check with technical team and communities.	Tetha, WWF Indonesia	ASAP end of day
				QPWS / CI protocols draft circulate to communities for comment	Ian Bell; Donna Kwan	Draft by April; Circulation May, Aug; final by end Oct, 2005
Assess, manage & mitigate impacts from - beach erosion - poaching - monitoring & harvesting	1	Communities - Hatching success data - Climate change data-SOPAC	Expert advice on erosion process, mitigation options, trials	SOPAC - QPWS - WWF Indo / TDA	Francis H, Colin Limpus, Ian Bell	Literature reports by end Nov 04
		Awareness linked to education initiatives Fisheries; Governments - NGO's	Funds: WSB and local theatre groups	Draw on local network	John Pita -WWF -TNC (Willie) WSB	By end 04 / 05 season
Coordinate national monitoring community networks, feed into regional network	1	Vanuatu model - Indonesian model - SI LMMA	Funds for a co-ordinator (SPREP ??)	SPREP (regional) - SI LMMA	Anne Trevor	ASAP subject to SPREP position.
Tag returns	1	SPREP QPWS	- Education and awareness materials - Central repository for tag returns - Standardise process to return tags / info -Translation needed	SPREP posters	- Anne - All	Now & ongoing
Expand satellite tracking of Leatherback turtles	1	- Scott Benson - Vagi / Kamiali - John Pita / Peter Ramohia (SI) -Papua community groups	Funds, technical assistance	- See resources list	- Vagi Rei	By 05 / 06 season
Investigate effective & locally appropriate predation exclusion methods	2	- Local people, information exchange (technical, local experience)	Depends on species and local area, technical assistance for example from literature	Local initiatives, networks (local. National, regional)	?	?
Compile & update information, historical & current (use traditional knowledge & science)	2	- SPREP literature database - Local / traditional knowledge - Other reports, papers etc	- Anne: for literature database - Funds to collate, review documents (consultancy)	- Anne - WWF BSSE funds	- Anne - Liz	??

Table 11: *Action Plan Framework for moving forward the highest priorities for Research & Monitoring.*

4.1.2 COORDINATION AND COLLABORATION

Name	Country	Name	Country
Anne Trevor	Samoa	Jackie Healy	Solomon Islands
Ken MacKay	Canada	Peter Ramohia	Solomon Islands
Vagi Rei	Papua New Guinea	Katherine Moseby	Solomon Islands
Collin Naru	Papua New Guinea	Penina Solomona	Fiji
John Pita	Papua New Guinea	Donna Kalfatak	Vanuatu
Peter Rex	Solomon Islands	George Petro	Vanuatu
Willie Atu	Solomon Islands	*Tetha Hitipeuw	Papua, Indonesia

Table 12: *Team members for the Co-ordination & Collaboration group.*

- ***Recommendations from previous presentations and plenary that the Coordination and Collaboration group were asked to assess:***
  - Establish marine turtle network (Regional)
  - Network action plan (Regional)
  - Community exchange / cross visits (Regional)
  - Networking with MPAs at both national and regional (Solomon Islands)
  - Policy reform - Review, promote effective enforcement (National and Regional)
  - Government to sign CITES (Solomon Islands)
  - Database & information exchange (Regional)
  - Identify government incentives (Solomon Islands)
  - Fundraising (Solomon Islands long term monitoring)
  - Tag return awareness (National and Regional)
  - Steering committee for Melanesian turtle forum network (Regional)
  - SPREP and government capacity building (National and Regional)

During the plenary the group expanded on these recommendations in more detail and highlighted three main areas that were considered to be the priority issues that they would like the Melanesian Forum to take forward.

1. Legal and Policy Review

- There is a great need for national and provincial legislation to help conserve turtles. Firstly an assessment of existing policies and laws needs to be done to assess the situation and recommended changes and/or the need for new laws.
- International conventions:
  - CITES (Vanuatu; PNG; Fiji are signatories, SI in the process), important in attempts to curb the bekko trade;
  - CMS (Convention on Migratory Species – only Samoa is a signatory, Australia & NZ are trying to expand this to cover marine turtles).
- SPREP has identified that they could get information on the above conventions to the countries, as it is important to help conservation and obtain funding.
- This Action Plan should be linked to marine mammals and dugongs as it is considering spaces.

- Community based resource management – incorporate traditional and cultural values into the policies & legislation (Ref: Creating legal space for community based fisheries and customary marine tenure in the Pacific islands: issues & opportunities. (FAO publication).
- Major constraint – money & capacity (some legal people in the country that can do it – Vanuatu) SPREP has an environmental lawyer who could help direct this.

2. Current status

- Assess and analyse the current levels of populations. Due to their small populations leatherback surveys have been conducted in Vanuatu (completed), PNG (in the process of) ; SI (Hawksbill surveys) at both national & provincial levels.
- Migration within and between countries
    - Tagging & database
    - Migration corridors for example: Papua & Indonesia
    - Feeding & nurseries
    - Threats & minimizations
    -

3. Benefits of Turtle Conservation

The group also linked their recommendations to the Regional Marine Turtle Conservation Programme and strategy through the following

- Use RMTCP AP as model and / or guide for Melanesian Turtle Conservation Action Plan;
- Refer to RMTCP AP 2003 – 2007 under the 'Management' section;
- Limited resource such as funding, human resources (PNG; Vanuatu, Solomon Islands);
- Need for legal coordination from SPREP;
- CMS and CITES membership – countries need more information (SPREP to facilitate);
- Link to dugong & marine mammals (SPREP);
- Need for increasing awareness for policies / existing legislation (For example: Vanuatu);
- Incorporate traditional and cultural values into policies and legislation (CBRM);
- Policy issue RMTCP TREDS information sharing;
- Incentives for tag return (has to use some incentives for recognition)
- Need to assess analysis of current level of population
    - National; provincial
    - Some existing / ongoing for example leatherback turtles in Vanuatu / PNG; Leatherbacks in SI
- Major threats and the need to minimize these threats;
- Benefits of turtle conservation;
- Connection between countries (for example) migration corridors.

There was overwhelming support for the establishment of a MELANESIA TURTLE CONSERVATION NETWORK.

Priority	Recommendations	Notes
High	Legal & Policy review	National & provincial
		International – CITES, CMS
		Link to dugong & marine mammals AP
		CBRM & incorporate traditional & cultural values into policies and legislation
		Policy issue RMTCP TREDS information sharing
		Enforcement
Medium	Current Status Assess and analysis current levels of populations	National & provincial levels
		Some existing / ongoing for example leatherback turtles in Vanuatu and Papua New Guinea
	Migration within and between countries	Tagging and database
		Migration corridors for example, Papua & Indonesia
		Feeding & nurseries
	Assess the Benefits of turtle conservation	

Table 13: *Co-ordination & Collaboration Prioritized Recommendations.*

Table 13 lists the recommendations that the Co-ordination and Collaboration group would like the Melanesian Turtle Forum to take forward. These recommendations are a revised version of the collated recommendations that were put forward earlier by the participants.

- **<u>COMMENTS ON THE PRESENTATION</u>**
  - Perhaps some place in there is the issue of enforcement, for example in the case of Solomon Islands Fisheries officers to be supported both by the government and the communities as well as external sources.
  - National legislation: some feel that the laws don't get translated to the communities. Currently there seems to be top-down approach and participants would like to see a bottom up approach. There are 2 parts to that:
    - Legislation review and translation to the communities
    - Enforcement
  - Even if you make amendments or reviews, it still needs to go to the communities
  - Legal people required to review national policy as well as financial constraints
  - Enforcement: Customary level to support national government (CMT)

Recommendations	Priority Rank	Resources on Hand	Resources Needed	Opportunities (who; where)	Lead person or org	Time frame
Legal & Policy review	1	- USP Law school - UPNG Law school - Attorney Generals - SPREP Legal advisor - FFA - SPC – Offshore Fisheries Programme - Communities	- Funding - Committed legal adviser - Staff capacity	- SPREP in collaboration with member states - SPC - FFA - WWF	SPREP Anne WWF Penina Solomona	2005 – 2007
Current status	2	- Focal points: DEC - Associated agencies / NGO's - SPREP turtle database officer - Traditional knowledge - Historical data - NOAA	- Funding for surveys - Technical expertise - Information accessibility from SPREP & other organisations	- NOAA - SPREP - Donors: Packard MacArthur - WWF - CI - TNC - WCS - WPRFMC	- SPREP: Anne - WWF: Penina	2005 – 2007
Benefits of turtle conservation	3	- Existing Eco-tourism projects - Traditional knowledge - Wan SmolBag theatre	- Funding - Information sharing - Marketing - Socio-economic study	- Donor agencies -Visitors bureau / authority - Environment dpt - Fisheries dpt - NGOs	- Vanuatu: Environment dpt - PNG: TPA - SI: SIVB, TNC, WWF	On going

Table 14: *Action Plan Framework for moving forward recommended priorities for Co-ordination & Collaboration.*

Notes:

- Have put a time frame there of 3 years to ensure that some actions are achieved.
- Most resources that have been identified need funding.
- There are resources on hand but just need to have a network formed
- Have given SPREP most responsibility due to their coverage within the region

4.1.3 AWARENESS AND EDUCATION

Name	Country	Name	Country
Baruga Jarau	Papua New Guinea	Bruno Manele	Solomon Islands
David Oweae	Papua New Guinea	Charlie Manua	Vanuatu
John Gonapa	Papua New Guinea	Willie Isnor	Vanuatu
Selarn Kaluwin	Papua New Guinea	Philip Dick	Vanuatu
Hugo Tafea	Solomon Islands	Annette Charlie	Vanuatu
Alan Tippet Bero	Solomon Islands	William Kodo	Vanuatu
Laurie Wein	Solomon Islands	Julius Lawalata	Papua, Indonesia

Table 15: *Team members for the Awareness & Education group*

- ***Recommendations from previous presentations and plenary that the Awareness and Education group were asked to assess:***
  - Educating politicians & building community political empowerment (Solomon Islands);
  - Improved communication & understanding with communities (Vanuatu);
  - Year of the Sea Turtle (Regional);
  - Simplify, translate, make more visual the research data received (Regional);
  - Report back results of research to communities & stakeholders (Regional);
  - Raising awareness / profile to seek donor attention (Solomon Islands);
  - Create network for reporting (Solomon Islands);
  - Exchange programmes across communities (using education tools and methods) to promote the protection of migratory routes (Papua New Guinea; Solomon Islands);
  - School curriculum development (National);
  - Raising awareness to commercial fishing companies SPREP; NOAA; National governments; FFA (Regional and National).

Priority	Recommendations
High	Raise profile to increase donor awareness Improved communication & understanding within communities Build community empowerment Year of the Sea Turtle School curriculum Report back research results to communities & stakeholders Simplify research data for communities
Medium	Educate politicians Exchange programmes to promote protection of migratory routes Create network for reporting Raise awareness in commercial fishing industry (SPREP, national governments, FFA, NOAA).

Table 16: *Awareness & Education Priorities Recommendations.*

Table 16 lists the recommendations that the Research and Monitoring group would like the Melanesian Turtle Forum to take forward. These recommendations are a revised version of the collated recommendations that were put forward earlier by the participants.

- **QUESTIONS AND COMMENTS ON THE PRESENTATION**

  - *What will you do with carrying out politician education?* **ANS**: First step is that it is important for communities to understand what their rights are and how they can effectively lobby their politicians.

  - *See that the number one priority is to raise donor awareness do you have any ideas?* **ANS:** Turtles are big news in donor community so that the profile for turtle conservation is quite high – in terms of getting donors, unless you make a conservation issue (For example turtles) linked to socio economic issue it wouldn't be very useful – need to make it resonate with donors.

  - ***Comments from the floor:*** Perhaps one way to do it is to promote the region, if it is a regional appeal to the donor community about turtles (leatherbacks) then it could be successful. However when environmental groups make appeals to donor about environmental issue it needs to be hand in hand with the other values of the species.

4.1.4 CAPACITY BUILDING AND TRAINING

Name	Country	Name	Country
Bing Siga	Papua New Guinea	Hobete Ghau	Solomon Islands
Philemon Tomala	Papua New Guinea	Charleon Falau	Vanuatu
Mary Bea	Solomon Islands	Francis Hickey	Vanuatu
Salome Topo	Solomon Islands	Donald James	Vanuatu
Moses Bulekolo	Solomon Islands		

Table 17: *Team members for the Capacity Building & Training group.*

- ***Recommendations from previous presentations and plenary that the Capacity Building and Training group were asked to assess:***
  - Expansion of monitors network and female monitors introduced (Vanuatu);
  - Sharing of information / practical experiences that will aid successful hatching (Solomon Islands);
  - Training needed for interpretation of data collected (Solomon Islands);
  - Build decision making skill of community based on data (Solomon Islands);
  - Standardize data collection (Solomon Islands; Regional) ;
  - Training for monitors (Vanuatu) ;
  - Fishermen / observer training (Regional) ;
  - Communities presenting at national / international meetings (Regional);
  - More training materials (identity cards of Pacific turtles) required (Vanuatu);
  - Training (Papua New Guinea);

- Tags / applicators (Papua New Guinea);
- Involvement of fishermen / industry (Solomon Islands);
- Build community capacity to revive, strengthen and use traditional management practices (Vanuatu);

Priority	Recommendations
High	Build community capacity to revive, strengthen and use traditional practices (in communities & schools)
	Training of monitors including female, youths, schools
	Training needed for tagging & applicator and interpretation of data collection
Medium	Building decision making skills of communities based on data collected
	Sharing of information & practical experience that will aid successful hatching and standardize data collected
	More training materials (all weather identity cards in ethnic language and English illustrating the turtles of the Pacific)
	Involvement of fishermen as well as the industry – addressing the bycatch issue
	Use of observers on fishing vessels to collect data on bycatch
	Community presentation at national, regional and international conferences based around their own data collected.

Table 18: *Capacity Building & Training Prioritised Recommendations.*

Table 18 lists the recommendations that the Capacity Building and Training group would like the Melanesian Turtle Forum to take forward. These recommendations are a revised version of the collated recommendations that were put forward earlier by the participants.

- **<u>QUESTIONS AND COMMENTS ON THE PRESENTATION</u>**

Why was it decided that traditional management should be the first priority? **ANS**: In the villages it used to be the practice to observe temporary closures. Nowadays, this is not so, and there is a need to go back and find out how this can be revived to help marine resources be replenished. Suppose that without tags (metal / satellite) need to get back to observing traditional practices to allow for the populations to recover.

Practical local knowledge has been used for so many years, how can this be continued? **ANS:** The prioritisation here was on the thinking that it is all long-term issues need to have this sustained, considering the generations to come. Perhaps the first 3 issues are considered to be HIGH & the others are MEDIUM

What about communities that have not practised it for so long that it is likely to be forgotten? **ANS:** in their research, it shows that ancient practices have been made into contemporary expression. Maybe it's not possible to revive all due to several factors (church, community structure) but contemporary expression still relies on traditional knowledge

Recommendations	Priority Rank	Resources on Hand	Resources Needed	Opportunities (who; where)	Lead person or org	Time frame
Raise profile of CBRM and turtles to donor community	1	- TEK - Communities, monitors & people, leaders, chiefs - Scientific / outside assistance, temporary	- Scientific assistance - Funding for small CBRM first	- Communities - Turtle monitors representative of the programme - Provincial leaders, governments; chief	- Government representative - Fisheries, project coordinators - national & international rep	3 -6 months
Improve communication and understanding in communities	1	- Communities - Turtle monitors - Project coordinators - Chiefs - NGOs - local churches, schools	- Appropriate communication strategy for different target audiences - Support from NGOs, Government, donors, - Funding	-WWF and support of others	- project coordinators	6 months – 1 year
Year of the turtle	1	- Media - Communities - NGOs	- Materials: posters, videos, pamphlets - Host agency	- SPREP - NOAA - National opportunities	- SPREP	1 year
Build community empowerment	1	- Turtle monitors, leaders - Department of Environment / Fisheries - NGOs (TNC, SIDT, VDT, WSB) CBOs	- Training of trainers (how to collect data, how to interpret data, how to make decisions about resources)	- CBOs - NGOs - Government		3 months →
School curriculum	1	- Teachers - Existing curriculum - Ministry of education Environment / Fisheries	- Materials	- Teachers, government - Volunteers - Environment & education units	- Government - Turtle monitors - Project coordinators - Teachers	1 year →
Simplify research data & reporting back to communities	1	- Existing monitors - Project coordinators - Local assistance - Field assistance for scientists	- Visual interpretations (posters, local languages, reports) - Trainings in data interpretation for coordinators & monitors, * issue of data ownership	- Scientists / SPREP - Local assistance to scientists - Turtle monitors & coordinators	- Project coordinators - CBOs - SPREP	2 – 3 years →

Table 19: *Action Plan Framework for moving forward recommended priorities for Capacity Building & Training.*

Recommendations	Priority Rank	Resources on Hand	Resources Needed	Opportunities (who; where)	Lead person or org	Time frame
We need expertise to sustain our knowledge on monitoring, interpreting data collection & sharing their experience to community people	1	Government department (Fisheries / Environment), SPREP, NOAA, WPRFC	Technical expertise and materials: tags, research, field work, awareness, biological survey, monitoring, community workshop, national workshop Revive traditional practices, sharing of expert ideas within the region, country based expert. Vanuatu, PNG, SI, Government department need to support the program	- SPREP - WWF - NOAA - TNC - CI - UNDP	- **Vanuatu:** Cultural centre; WSB; Fisheries; Environment - **Solomon Is:** Government, Fisheries, Environment - **PNG**: NGOs – WWF; CBOs Government: Environment & Fisheries	On going, forever
We need personal experience on Proposal writing	1	NGOs: WSB; CBOs; TDA; WWF	Training materials Workshops: government departments; NGOs-Finance			

Table 19 (cont.): *Action Plan Framework for moving forward recommended priorities for Capacity Building & Training.*

Notes:

The objectives of this component of the action plan are to:

- Increase awareness in communities of marine turtle conservation (short term)
- Over time through community based projects, supported by regional and national scientific, training and policy initiatives increase the population of turtles.

The timeframe for the short-term phase would be between 1-3 years and the second component over a much longer period 4-8 years and then 9-30 years (which relates to the period when a marine turtle first lays eggs).

This component was compiled based on feasibility in terms of financial resources and technical capacity.

4.2 Steering Group and Process to deliver the Action Plan

4.2.1 VISION AND GOAL FOR THE MELANESIAN TURTLE FORUM

During their presentation, the Coordination and Collaboration group proposed that the Melanesian Turtle Forum retain the SPREP RMTCP Vision and Goal to guide the Action Plan.

The **Vision** states:

"*We see a future where generations of Pacific Island people will have choices about how they use and interact with sea turtles. This will be achieved if we take action now to ensure that sea turtle populations recover to become healthy, robust and stable. Sea turtles will be fulfilling their ecological role; and if they are taken by Pacific Island people, it will be on a sustainable basis to meet their cultural, and nutritional needs".*

The **Goa**l states:

To recover turtle stocks, and conserve them and their cultural and nutritional values for the coastal people of the countries served by SPREP".

Both the Vision and the Goal are in line with the recommendations proposed by this forum and have already been endorsed by the countries that are members of SPREP.

4.2.2 PROPOSED STEERING GROUP

During the Western Pacific Sea Turtle Cooperative Research and Management workshop in Hawaii earlier in the year, key people in Solomon Islands, Papua New Guinea, Papua, Indonesia, Vanuatu and regionally had been identified as being the main contacts to coordinate this Forum. At this Forum, it was proposed that these people (and others once identified) would be the main contacts for supporting SPREP and the countries implement the Action Plan for the Melanesian Turtle Forum.

Name	Organisation, Country	Email Contact
Anne Patricia-Trevor	SPREP, Samoa (Regional)	annet@sprep.org
John Pita	Department of Environment and Natural Resources, Solomon Islands	jpita@etoast.com
Peter Ramohia	Department of Fisheries and Marine Resources, Solomon Islands	peter.ramohia@ffa.int
Vagi Rei	Department of Environment, Papua New Guinea	vagirei@yahoo.com.au
George Petro	Wan Smolbag, Vanuatu	wansmolbag@vanuatu.com.vu
Penina Solomona/	WWF South Pacific Programme, Fiji (Regional)/	psolomona@wwfpacific.org.fj
Lisette Wilson	Bismarck-Solomon Seas Ecoregion Programme	lwilson@wwfpacific.org.pg

4.2.3 PROPOSED NEXT STEPS (2005) FOR THE MELANESIAN TURTLE FORUM:

- Recruitment of SPREP Species Coordinator;
- Identification of other organisations/individuals to be on the Steering Group;
- Endorsement by National Governments for members of the steering group and terms of reference developed;
- Update the SPREP RMTCP and Solomon Islands National Strategies and Actions Plans to reflect the recommendations and actions identified at the Melanesian Turtle Forum;
- Funds secured to convene the Steering Group at least once a year, preferably before the nesting season to evaluate and review process ;
- Steering group to secure funds and resources to coordinate the implementation of priority recommendations identified in the Melanesian Action Plan:
    - Review of policy and legal frameworks at both the National and Regional level to assess effectiveness and identify gaps and strategies to provide a enabling legal environment (including enforcement) for marine turtle conservation
    - Technical Advisory Group identified to assist with implementing key recommendations relating to monitoring, community capacity building and training
    - Agreement reached by SPREP and the Steering Group for the Melanesian Turtle Forum as to whether 2006 should be "Year of the Sea turtle" and if affirmative a communications and awareness strategy (local, national and regional), linked to a funding plan developed now as a high priority.
    -

In addition, Wan Smolbag, and participants from PNG and Solomon Islands as a farewell gift for Tetha and Julius who had come so far and then had to leave early composed a Melanesian Turtle song for them, which they sang just before the two left on Thursday afternoon.

MELANESIAN TURTLE SONG

1. Long, long taem bifo
   Long ol islands blong yumi
   Ol totel oli bin fri
   Totel, otum egg, mekem oli plenty
   Long ol sand beach blong yumi (x2)

2. Man I kilim
   Na mekim mo moni long
   ol trosel blong yumi
   Conservim olgeta, na no ken kilim ol
   Na lusim ol I stap
   Long future taem (x2)

CHRS:
Sevem olketa
Givim chains blong oli live
Sevem olgeta
Blong ol pikinini blobg yumi

SESSION 5.0
FIELDTRIP PICTURES

Fig. 11*: Workshop participants leaving for Isabel.*

Fig. 12: *Dr. Scott Benson (NOAA) illustrating the use of PIT tags to workshop participants.*

WORKSHOP CLOSING

The Forum closed at 4.30pm, Thursday 4 November, 2005, with the certificate ceremony. Dr. MacKay presented each of the participants with a certificate acknowledging their attendance and contribution to this inaugural Forum. Although there was no official evaluation, each of the participants was asked to say a few words on how useful this Forum was as he/she received their certificate.

- **CLOSING SPEECHES**

Kenneth MacKay (C-SPOD): Good afternoon. Thank you Liz. Probably a year & a half ago, he & Job were talking about some money that was to be left over with C-SPOD for a Melanesian Workshop, then discussed in Vanuatu with WSB – then at the Hawaii turtle meeting (WPFC) Tetha was there and was presenting on a network on leatherback research (Vagi & Anne , JP were also there) so they said to plan a workshop in Gizo with WWF organising – Fisheries council could give half of the money with SPREP giving the other half – that was the easy part. From there – getting here was not easy – Papua had visa problems etc., but most of us got here – the original idea was to share information and also plan for the future so what you've achieved is incredible as you've had a lot of presentations – WSB wants to go train Papua, Vagi is wanted by TDA, sharing of information has been enormous – from my point of view, all of our objectives were met and maybe even more – possibly one of the best regional meetings that he's been. Been an experiment for the language – saw no turtles and no nests but saw problems. Has certainly been a success – this afternoon had a phone call from Radio NZ international to talk about leatherback turtles – they didn't understand how serious the trouble was with leatherbacks – thanks to everyone at WWF SI for the incredible amount of work put into it. WWF SI has done an incredible job – Peter Ramo for all the work done on the field trip, the WPRFC for supplying not only over half the funds for this workshop but also for the Director of SPREP, the Turtle database officer and Karen – thanks to the facilitators – what has been said on the radio is that the scientists predict that in 20 years there will be no leatherbacks – his hope is that in 10 years there will be more leatherbacks and so that's up to you.

Liz Wilson (WWF PNG): thanks to all of those who've attended and echoing Ken's earlier words, is very happy that we have achieved more than what was expected. Would like to think of this workshop as a nesting beach, where all the folk have come to share their knowledge and learn from each other. As they go back, they will take with them new ideas and friendships which will strengthen their programmes at home and when they return for the next workshop, their numbers would have increased and so would the leather back turtles swimming in the waters of the Bismarck-Solomon Seas, Vanuatu, the Pacific and Globally. The leatherback turtle is a symbol of hope for this region and is shared with those in many other parts of the world, especially where numbers have rapidly decreased. As a species that follows a migratory pattern across the seas of Melanesia, she binds together these countries, the community aspirations and partnerships that WWF hopes will come to represent the future shape of conservation. Vinaka vaka levu to the facilitators for their help, and a special thank you to Penina, Sue and Sereamia in regional office. Have learned that one should always be prepared to step

up should things not happen the way it was meant to be and deal with things the Pacific way. Extremely grateful and proud of the WWF SI office who have done a terrific job, and overcome all the frustrations and challenges to support this workshop, the first for this region, to bring together community members from Vanuatu, PNG, SI and Papua to strengthen leatherback conservation in this region. Acknowledges SPREP for the work that they are doing and have committed WWF's support for this programme. Grateful to the sponsors -C-SPOD, SPREP and Western Pacific Regional Fisheries Management Council for funding this extremely worthy initiative and look forward to working with them again in the near future.

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PARTICIPANTS LIST AND CONTACTS

Country	**Location Area**	**Name**	**Designation**	**Organization**	**Email / Postal contact**
Australia	Brisbane	Dr. Donna Kwan			donna.kwan@crctorres.com
Fiji	Fiji	Dr.Kenneth T. MacKay	Field Program Coordinator, C_SPOD	C-SPOD & Pacific Islands Forum Secretariat	mackay_k@usp.ac.fj
Fiji	Suva	Ms. Penina Solomona	Regional Marine Officer	WWF South Pacific	psolomona@wwfpacific.org.fj
Papua, Indonesia	Sorong	Ms. Creusa Hitipeu	Bismarck-Solomon Seas coordinator-Sahul bioregion, Papua	WWF Sahul bioregion, Papua, Indonesia	neneruga@yahoo.com; creusa@telkom.net
		Mr. Julius Lawalata			
Papua New Guinea	Huon Coast	Mr. Bing Siga	Community participants		
		Mr. Baruga Jarau			
		Mr. Moses Jerry			
		Mr. David Oweae			
	Kamiali ICDG	Mr. Levi Ambio			
		Mr. Colin Naru			
		Mr. Yaling Micheal			
		Mr. Manase Tusi			
	Manus	Mr. Selarn Kaluwin	Community Participant		
	Milne Bay	Mr. Noel Wangunu		Conservation International	nwangunu@conservation.org
		Mr. John Gonapa			
	Port Moresby	Mr. Vagi Rei	Scientific Officer	Department of Environment & Conservation;	vagirei@yahoo.com.au; cons@daltron.com.pg
		Mr. James Sabi			
		Mr. Paul Lokani	Melanesian Programme Director	The Nature Conservancy	
		Ms.Lisette Wilson	Bismarck-Solomon Seas Coordinator	WWF PNG	lwilson@wwfpacific.org.pg
Samoa	Apia	Mr. Asterio Takesy	Director	SPREP	asteriot@sprep.org

		Ms. Anne Trevor	Assistant Turtle Database Officer		annet@sprep.org
	Tetapare-Munda	Mr. Allan Tippet Bero		Tetepare Descendants Association community representatives	
		Ms. Mary Bea			
	Tetapare-Baniata	Mr. George Hite			
	Tetapare-Havila	Mr. Nicolson Guhumi			
	Tetapare-Field Station	Mr. Mamu Bero			
		Mr. William Kodo			
		Mr. Hobete Ghau			
		Mr. Moses Pulekolo			
		Mr. David Argument			
		Ms. Laurie Wein			
		Mr. Philemon Tomala			
		Mr. John Reid			
		Ms. Katherine Moseby			
	Munda	Mr. Mason Tauku		World Fish Center	
	Gizo	Mr. Bruno Manele	Marine Conservation Officer	WWF Solomon Islands	wwf@solomon.com.sb
		Ms. Salome Topo	Sustainable Livelihoods Officer		
	Honiara	Mr. Peter Ramohia	Deputy Director	Department of Marine resources and fisheries (DMRF)	sbfish@ffa.int
		Mr. Peter Rex			
		Mr. Michael Danibea			
		Ms. Catherine Siota		TNC	
Vanuatu	Malekula	Mr. Willie Isnor	Community Turtle Monitors		
	Epi	Mr. Philip Dick			
	Efate	Mr. Donald James			
		Mr. Charley Manua			
	Aniwa	Mr. Mike Shem			
	Port Villa	Mr. George Petro			
		Mr. Francis Hickey			
		Charleon Falau			
		Donna Kalfatak			
		Annette Charlie			

United States of America	Hawaii	Ms. Karen Frutchey		NOAA Fisheries, Pacific Islands Regional Office, 1601 Kapiolani Blvd., Suite 1110, Honolulu, HI 96814-4700	Karen.Frutchey@noaa.gov
	San Diego, California	Dr. Scott Benson		National Marine Fisheries Service	Scott.Benson@noaa.gov

MELANESIAN MARINE TURTLES CONSERVATION FORUM PROGRAMME

Location	Day	Time	Programme	Session	Facilitators
Gizo	Friday 29 October	1700	Informal evening—dinner & networking		
	Saturday 30 October	900	Official Opening	Provincial Representative, Western Province, Director SPREP, Kenneth MacKay	Peter Ramohia, MFMR
		Rest of Day:	Case Studies of Community Conservation	**Presentations:** Arnarvron, Vanuatu, Miline Bay, Kamiali, Papua, Tetapere, others	
		Evening	Opening Reception & networking		
	Sunday 31 October	Morning Free	(Church)		
		Afternoon	Community education principles and ideas	**Examples and Discussions** Vanuatu WSB, Arnarvon-TNC. Milne Bay-CI Kamiali-PNG, Papua-Tetha	Jackie Healy WWF Solomon Islands
		Continuing into evening	Small group discussions		
	Monday 1 November	Morning	Status of Turtle Conservation in Melanesia	Conservation of marine turtles experience from Queensland, Australia, PNG, Papua, Vanuatu, New Caledonia Solomon Islands, Fiji??	Kenneth MacKay, C-SPOD
	Monday 1 November	Afternoon	Leatherback Turtles Conservation and Monitoring	Leatherback turtles: Current status and knowledge of migration in the Pacific	Scott Benson
				Tags and Tagging	Scott Benson with input on community involvement from PNG and Papua
				Regional Tagging Data Base	Anne Trevor
				Introduction to Monitoring and Beach Surveys	Scott Benson with input from Solomon Is, PNG and Papua

Location	Day	Time	Programme	Session	Facilitators
Isobel	Tuesday 2, Nov	Depart for Isobel 6am return Wednesday 1 pm	Group 1 PNG, Papua, some SI (Choisel & others)	Research & Monitoring Field Trip to Isobel. Travel by boat to Flamingo Bay, meals and theoretical training on boat, divide into two groups visit two different beaches Sasakola & Litoghahira for turtle monitoring and tagging practical experience, Day-beach survey count crawls & nests Night---(If turtles located) observe nesting, tagging--metal & pit, observe collection of material for DNA analysis , and possibly satellite tagging	Scott Benson with assistance from resource people John Pita & Peter Ramohia, Tetha, Vagi Rei
Gizo		Morning & afternoon	Group 2 Vanuatu, Isobel, Tetapare, and others	Environmental Theatre Workshop	*Charleon Falau and Annette Charlie, Wan Smolbag*
Gizo	Wednesday 03, Nov	Morning	Group 2	Free for informal networking	
		Afternoon	Group 1 returns	Short (1/2 hr) debriefing on nesting activity	Group 1 Representative
	Wednesday 03 Nov	Afternoon	Future Networking: Addressing immediate needs, mapping out the priority areas and issues and collectively developing a strategy to address these issues	Establishment of a Western Pacific Leatherback Working Group, to provide a forum for information collection and exchange, to promote collaboration, and build consensus for continued leatherback turtle research, conservation and sustainable management	Lisette Wilson, WWF Papua New Guinea Small group selected to continue discussion on Thursday morning.
				A draft Plan of Action for Western Pacific leatherback turtles that includes strategies for trans-boundary plans of action (Solomon Islands, Papua New Guinea and Papua), and national initiatives for all three countries.	
		Evening	Official Close and farewell reception & dinner		
Gizo	Thursday 4 November	Morning and afternoon	Group 1	Environmental Theatre Workshop	Charleon Falau and Annette Charlie, Wan Smolbag
Isobel			Group 2 Depart for Isobel	Research & Monitoring Field Trip Programme as for group 1,	
Honiara		Pm-4.20pm	Group 1	Return to Honiara and back to PNG/Papua on Friday 5th	
Gizo	Friday 05	Morning	Group 2 return to Gizo to catch 4.20pm flight		
Honiara	Saturday 06		Vanuatu, Fiji, Samoa people return home		

APPENDICES